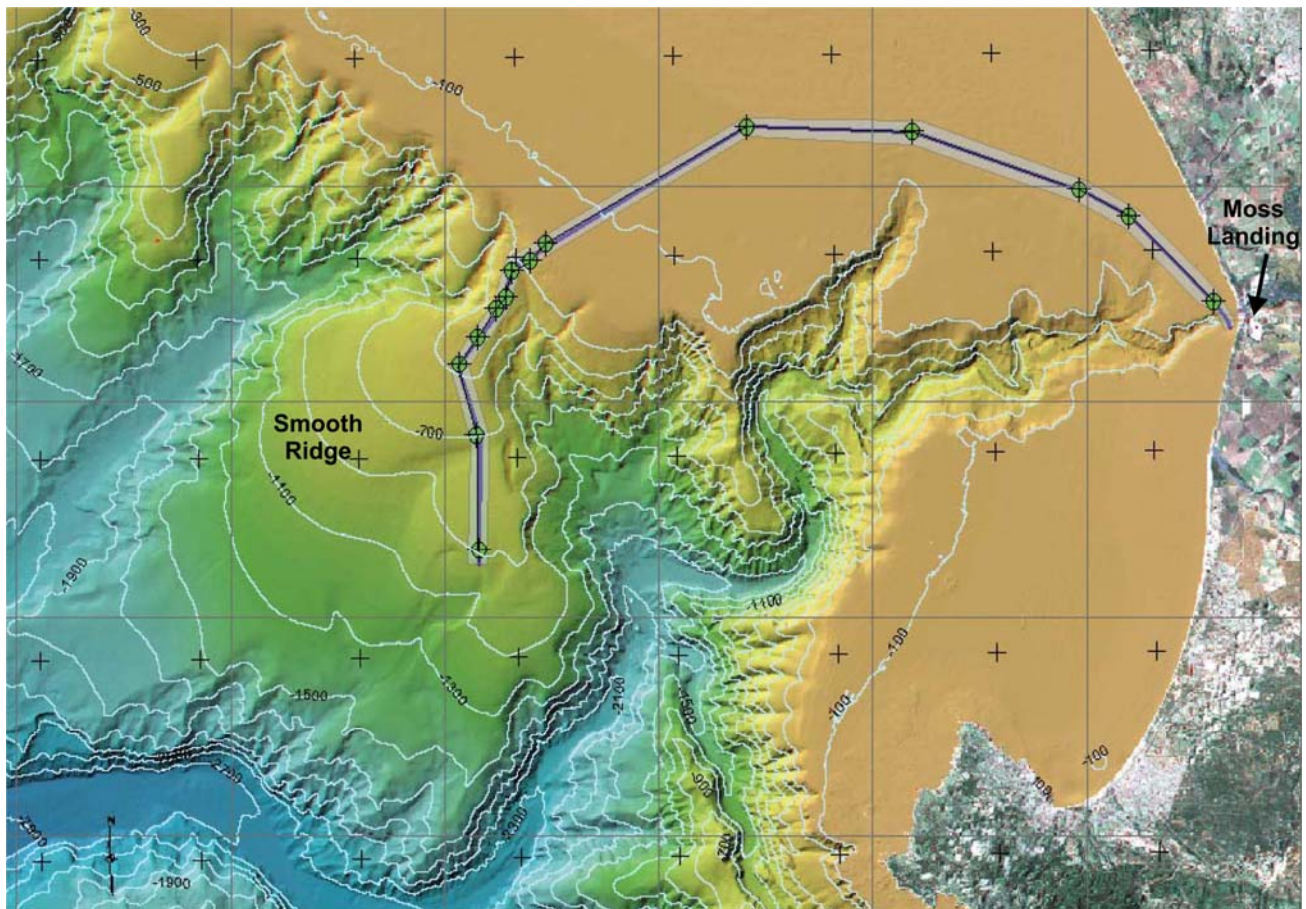


Final Environmental Impact Report/ Environmental Impact Statement for the Monterey Accelerated Research System Cabled Observatory

July 2005



State Clearinghouse No. 2004051138
Federal Docket No. 04-11738
CSLC EIR/EIS No. 731

Lead Agencies:

California State Lands Commission
Monterey Bay National Marine Sanctuary

Final

**Environmental Impact Report/
Environmental Impact Statement**

for the

**Monterey Accelerated Research System
Cabled Observatory**

State Clearinghouse No. 2004051138

Federal Docket No. 04-11738

CSLC EIR/EIS No. 731

Lead Agencies:

California State Lands Commission
Monterey Bay National Marine Sanctuary

Prepared by:

California State Lands Commission
Monterey Bay National Marine Sanctuary
Aspen Environmental Group

July 2005

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. INTRODUCTION	1-1
1.1 Purpose	1-1
1.2 Organization of Final EIR/EIS	1-1
1.3 Decision Making Process.....	1-2
1.3.1 Certification of the Final EIR/EIS.....	1-2
1.3.2 Record of Decision.....	1-3
2. SUMMARY OF PUBLIC REVIEW PROCESS	2-1
2.1 Notice of Preparation / Intent and Scoping	2-1
2.2 Notice of Completion and Draft EIR/EIS Public Review	2-1
3. RESPONSE TO COMMENTS	3-1
Comment Set 1	3-2
Comment Set 2.....	3-21
Comment Set 3.....	3-26
Comment Set 4.....	3-31
Comment Set 5.....	3-34
Comment Set 6.....	3-57
Comment Set 7.....	3-59
Comment Set 8.....	3-62
4. REVISED PAGES TO THE DRAFT EIR/EIS	4-1

APPENDIX

LIST OF TABLES

<u>Table No.</u>	<u>Page No.</u>
3-1 Commenters and Comment Set Numbers.....	3-1

LIST OF FIGURES

<u>Figure No.</u>	<u>Page No.</u>
2.1-9 Proposed Cable Landing Site and Shore Facility Location	4-11

LIST OF ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
ACHP	Advisory Council on Historic Preservation
ACOE	U.S. Army Corps of Engineers
ADCP	acoustic doppler current profiler
APE	Area of Potential Effect (National Historic Preservation Act)
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
bgd	billion gallons per day
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMPs	Best Management Practices
BO	Biological Opinion
BTU	British thermal unit
°C	degrees Celsius
CAA	Clean Air Act
CARB	California Air Resources Board
CCC	California Coastal Commission
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cm	centimeter
CO	carbon monoxide
CSLC	California State Lands Commission
CTD	conductivity, temperature, and depth
CWA	Clean Water Act
dBA	decibels on the A-weighted scale
DHTs	downhole tools
DO	dissolved oxygen
DOT	U.S. Department of Transportation

EARTH	Education and Research: Testing Hypotheses
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FERC	Federal Energy Regulatory Commission
fps	feet per second
g	acceleration of gravity
gpm	gallons per minute
HAPs	hazardous air pollutants
HDD	horizontal directional drilling
hp	horsepower
IODP	Integrated Ocean Drilling Program
km	kilometer
kW	kilowatt
lb	pound
ISO Van	A type of shipping container built to the standards of International Organization for Standardization, used to house scientific equipment
LCP	Local Coastal Program
L _{dn}	day-night sound level
L _{eq}	equivalent steady sound level that provides an equal amount of acoustical energy as the time-varying sound
L _{eq(24)}	24-hour equivalent sound level
LOS	level of service
LWP	lightweight protected
m	meter
m/s	meters per second
m ³	cubic meters
µg/m ³	micrograms per cubic meter
MARS	Monterey Accelerated Research System
MBA	Monterey Bay Aquarium
MBARI	Monterey Bay Aquarium Research Institute
MBNMS	Monterey Bay National Marine Sanctuary

MBUAPCD	Monterey Bay Unified Air Pollution Control District
mg/l	milligrams per liter
mgd	million gallons per day
MLML	Moss Landing Marine Laboratories
MMP	Mitigation Monitoring Program
MOU	Memorandum of Understanding
MP	milepost
mph	miles per hour
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Policy Act
NEPTUNE	North-East Pacific Time Series Undersea Networked Experiments
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
nm	nautical miles
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI/P	Notice of Intent/Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSA	noise sensitive area
NSF	National Science Foundation
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
O ₃	ozone
O&M	operation and maintenance
OOI	Ocean Observatories Initiative
OSHA	Occupational Safety and Health Administration

Pb	lead
PLGR	pre-lay grapnel run
PLIB	Post-Lay Inspection & Burial
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
ROD	Record of Decision
ROVs	remotely operated vehicles
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SA	single armor
SAL	single armor light
SARA	Superfund Amendments and Reauthorization Act
SCH	State Clearinghouse
scf	standard cubic foot
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasure Plan
SWPPP	Storm Water Pollution Prevention Plan
USDA	U.S. Department of Agriculture
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USCG	U.S. Coast Guard
USGS	U.S. Geological Survey
VOC	volatile organic compound

1. INTRODUCTION

1.1 PURPOSE

This document is the finalizing addendum to the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) prepared for the consideration of a new lease by the California State Lands Commission (CSLC or Commission) and a Research Permit by the Monterey Bay National Marine Sanctuary (MBNMS) for the proposed Monterey Accelerated Research System (MARS) Cabled Observatory Project. The National Science Foundation (NSF), which approves funding for the Project, is a cooperating agency. The Project applicant is the Monterey Bay Aquarium Research Institute (MBARI). This document, together with the Draft EIR/EIS distributed for public review in March 2005, constitute the Final EIR/EIS for the proposed Project.

This Final EIR/EIS has been prepared by the CSLC and MBNMS pursuant to the California Environmental Quality Act (the CEQA) (Section 21000 et seq., California Public Resources Code), in accordance with the *Guidelines for the Implementation of the California Environmental Quality Act* (Section 15000 et seq., California Code of Regulations, Tit. 14), and the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations (CFR) Section 1502 et seq.). An EIR/EIS must be prepared for any project or major federal action that may have a significant impact on the environment. The MARS Cabled Observatory Project is a “project” as defined by the State CEQA Guidelines and the issuance of a Research Permit is considered a “major federal action” by the MBNMS. Upon preliminary review, the CSLC and MBNMS determined that the MARS Cabled Observatory Project may have a significant adverse impact on the environment and, therefore, an EIR/EIS is required. The CSLC and MBNMS selected an environmental contractor to prepare the EIR/EIS to ensure that the document reflects an independent, objective analysis of the proposed Project.

The CSLC and MBNMS are the Lead Agencies for this proposal and the Final EIR/EIS will be used by the CSLC and MBNMS as part of their processes, including setting the conditions of the lease agreement, if approved, and Research Permit, and incorporating mitigation measures for project implementation. A Mitigation Monitoring Program is incorporated in Section 6 of the Draft EIR/EIS, and revisions to the text of the Draft EIR/EIS are presented in Section 4 of this document.

1.2 ORGANIZATION OF FINAL EIR/EIS

The Final EIR/EIS consists of the following elements:

- The Draft EIR/EIS.

- A list of persons, organizations, and public agencies commenting on the Draft EIR/EIS (see Section 2).
- Comments and recommendations received on the Draft EIR/EIS (see Section 3).
- Responses to significant environmental points raised in the review and consultation process (see Section 3).
- Revisions to the Draft EIR/EIS (see Section 4).

Additional information is also provided, including a transcript of the public hearings conducted on April 7, 2005 (see Appendix).

1.3 DECISION-MAKING PROCESS

The CSLC is the CEQA lead agency for this Final EIR/EIS because the Commission has jurisdiction over the State tidelands and submerged lands that would be crossed by the proposed Project. The MBNMS is the NEPA lead agency because it has jurisdiction over activities within the Sanctuary, including research activities. The CSLC will use the Final EIR/EIS in its decision-making processes to help determine whether to issue a lease of State lands and the MBNMS will use the document in its decision on whether to issue a Research Permit for the proposed Project. The NSF, as a cooperating agency, will utilize the document in its decision whether to approve funding for the Project.

1.3.1 State Certification of the Final EIR/EIS

Prior to taking action on the proposed Project, the CSLC must certify the Final EIR/EIS. The CSLC must certify that:

- The Final EIR/EIS has been completed in compliance with the CEQA;
- The CSLC reviewed and considered the information contained in the Final EIR/EIS prior to considering the proposed Project; and
- The Final EIR/EIS reflects the independent judgment and analysis of the CSLC and MBNMS (State CEQA Guidelines section 15090).

In conjunction with certification of the Final EIR/EIS, the CSLC must prepare one or more written findings of fact for each significant environmental impact identified in the document. These findings must either state that:

- The Project has been changed (including adoption of mitigation measures) to avoid or substantially reduce the magnitude of the impact;

- Changes to the Project are within another agency's jurisdiction and have been or should be adopted; or
- Specific considerations make mitigation measures or alternatives infeasible.

If any of the impacts identified in the EIR/EIS cannot be reduced to a level that is less than significant, the CSLC may issue a Statement of Overriding Considerations for approval of the project if specific social, economic, or other factors justify a project's unavoidable adverse environmental effects. However, as indicated in the Draft EIR/EIS, the proposed Project would not result in any significant, unavoidable adverse environmental effects. If the CSLC decides to approve a project for which a Final EIR/EIS has been prepared, the CSLC will issue a Notice of Determination. The CSLC decision on the proposed Project will be made at a public hearing.

1.3.2 Federal Record of Decision

The NEPA requires MBNMS to circulate the Final EIR/EIS for at least 30 days prior to making a decision on the proposed Project (40 CFR 1502.19) in the form of a Record of Decision (ROD). There is no requirement to respond to comments received on the Final EIR/EIS; however, the MBNMS decision-makers will consider all comments received prior to making a decision on the proposed Project. The MBNMS will adopt the Final EIR/EIS after determining that it meets the standards for EIS adequacy under the NEPA, the Council on Environmental Quality (CEQ) NEPA Regulations, and its own NEPA regulations.

After the Final EIR/EIS has been adopted, the MBNMS will make a decision regarding the application for a Research Permit that would allow implementation of the MARS Cabled Observatory Project. The MBNMS will prepare a ROD, which is a written public record explaining the MBNMS' decision on the proposed Project. The ROD will include:

- An explanation of the decision;
- Factors considered in making the decision;
- Alternatives considered and the environmentally preferred alternative;
- Any adopted mitigation measures or reasons why mitigation measures were not adopted; and
- A monitoring and enforcement program for those mitigation measures that were adopted.

A public hearing is not required to issue the ROD.

2. SUMMARY OF PUBLIC REVIEW PROCESS

2.1 NOTICE OF PREPARATION / INTENT AND SCOPING

The EIR/EIS process for the MARS Cabled Observatory Project began with distribution of a Notice of Preparation by the CSLC, mailed on May 25, 2004, and publication of a Notice of Intent by the MBNMS, published in the *Federal Register* on May 25, 2004. Two public scoping meetings to solicit public and agency input on the appropriate range of issues and alternatives to be examined in the EIR/EIS were conducted on June 9, 2004, at Moss Landing Marine Laboratories (MLML) in Moss Landing, California.

2.2 DRAFT EIR/EIS PUBLIC REVIEW

In March 2005, a Notice of Completion/Notice of Availability was distributed announcing the release of the Draft EIR/EIS. The Notice summarized the conclusions of the Draft EIR/EIS and included information on how to access the Draft EIR/EIS. It also presented the date, times, and location of the Public Hearings on the Draft EIR/EIS.

The Draft EIR/EIS was released for public review on March 11, 2005, and consisted of approximately 460 pages with appendices, including a detailed analysis of impacts in nine environmental disciplines. A summary of public involvement opportunities during the Draft EIR/EIS review period is presented below. A list of persons, organizations, and public agencies commenting on the Draft EIR/EIS, the comments received on the Draft EIR/EIS, and responses to the comments are provided in Section 3 of this Final EIR/EIS.

Public Review Period

In compliance with the CEQA and NEPA procedures, the CSLC and MBNMS provided a public review period of 45 days for the Draft EIR/EIS. The public review period extended from March 11, 2005, to April 26, 2005. The lead agencies allowed written comments on the Draft EIR/EIS to be submitted by mail, orally at the Public Hearings, via e-mail, and in person to the CSLC office in Sacramento and MBNMS office in Monterey.

The comments received by the CSLC and MBNMS during the public review period and at the Public Hearing are reproduced in this Final EIR/EIS along with responses to comments (see Section 3).

1 **Public Hearings**

2 Two Public Hearings on the Draft EIR/EIS were held jointly by the CSLC and MBNMS
3 on April 7, 2005, at the Moss Landing Marine Laboratories in Moss Landing, California.
4 At these hearings, the public was given the opportunity to ask questions about the Draft
5 EIR/EIS and present oral and/or written testimony on the Draft EIR/EIS and its contents.
6 The decision-making processes of the CSLC and MBNMS were also explained at the
7 Public Hearings.

8 **EIR/EIS Information and Repository Sites**

9 Placing the CEQA/NEPA documents in “repository” sites can be an effective way of
10 providing ongoing information about the project to a large number of people. Therefore,
11 five repository sites in the vicinity of the proposed Project area were established, and
12 documents are also available at the CSLC office in Sacramento. EIR/EIS-related
13 documents including the Draft and Final EIR/EIS have been made available upon their
14 release to the public at the locations listed below.

CSLC, Attn: Stephen L. Jenkins or
Michelle Brown
100 Howe Ave., Suite 100-South
Sacramento, CA 95825
(916) 574-1814

MBNMS, Attn: Deirdre Hall
299 Foam Street
Monterey, CA 93940
(831) 647-4207

Monterey Co. Library, Pajaro
29 Bishop Street
Pajaro, CA 95076-5266
(831) 761-2545

Monterey Co. Library, Castroville
11266 Merritt Street
Castroville, CA 95012-3420
(831) 633-2829

Central Library
224 Church Street
Santa Cruz, CA 95060-3810
(831) 420-5700

Monterey Public Library
625 Pacific Street
Monterey, CA 93940
(831) 646-5601

15

3. RESPONSE TO COMMENTS

Copies of the written comments that were submitted on the Draft EIR/EIS are provided in this section, as well as excerpts of the transcripts from the Public Hearings held on April 7, 2005 (complete transcripts are in the Appendix). Each numbered comment set is immediately followed by the corresponding responses. Comment letters are presented chronologically, in the order of the date of the comment, followed by the comments received during the Public Hearings. Errata and minor text clarifications within the Draft EIR/EIS arising from the comments and responses are presented in Section 4.

Individual comments are numbered in the margins of each comment letter and correspondingly numbered responses follow each letter. Table 3-1 lists all comments and shows the comment set identification number for each letter.

Table 3-1. Commenters and Comment Set Numbers

Agency/Affiliation	Name of Commenter	Date of Comment	Draft EIR/EIS Comment Set
California Coastal Commission	Audrey McCombs, Analyst, Energy and Ocean Resources Unit	4/06/2005	1
Monterey Bay Unified Air Pollution Control District	Jean Getchell, Supervising Planner	4/11/2005	2
U.S. Environmental Protection Agency	Lisa B. Hanf, Manager, Environmental Review Office	4/20/2005	3
Monterey County Planning and Building Inspection Department	Brett C. Becker, Associate Planner	4/21/2005	4
Alliance of Communities for Sustainable Fisheries	Kathy Fosmark	4/25/2005	5
NOAA National Marine Fisheries Service	Monica L. DeAngelis, Marine Mammal Biologist	4/25/2005	6
Moss Landing Harbor District	Linda G. McIntyre, Esq., General Manager/Harbormaster	4/26/2005	7
Moss Landing Fishermen's Association	Tom Hart	4/7/2005	8

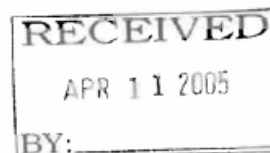
1 COMMENT SET 1: CALIFORNIA COASTAL COMMISSION

STATE OF CALIFORNIA--THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, GOVERNOR

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



April 6, 2005

Michelle Brown
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825

Deirdre Hall
NOAA's Monterey Bay National Marine Sanctuary
299 Foam Street
Monterey, CA 93940

Re: Draft EIR/EIS for MARS Cabled Observatory

Dear Ms. Brown and Ms. Hall:

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report/Environmental Impact Statement for the Monterey Accelerated Research System Cabled Observatory.

The Coastal Commission has retained coastal permit jurisdiction over the portion of the project in State waters. In addition, since the project also requires a federal permit from the U.S. Army Corps of Engineers, it must be reviewed for its consistency with California's Coastal Management Program pursuant to Section 307(c)(3)(A) of the federal Coastal Zone Management Act. Our comments on the draft EIR/EIS address information the Coastal Commission will need to evaluate the project under the resource policies of Chapter 3 of the Coastal Act. Specific comments on the draft EIR/EIS follow below.

Section 1.4: Consistency with State, Regional and Local Plans

1. Section 1.4 should be expanded to include discretionary actions by federal agencies, such as the US Army Corps of Engineers, NOAA Fisheries, the US Coast Guard, and the US Fish and Wildlife Service. The section should include a discussion of federal policies such as the Clean Water Act, the federal Endangered Species Act, the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the National Historic Preservation Act. A discussion of the Commission's authority under the Coastal Zone Management Act should also be included in this section.

1-1

CCC Comments on MARS Draft EIR/EIS
 April 6, 2005
 Page 2

Section 1.4.6: Coastal Act

2. Section 30600 of the Coastal Act requires any person wishing to perform development in the coastal zone to obtain a coastal development permit (CDP). This project is subject to coastal development permit requirements. The Coastal Commission retains CDP jurisdiction over tidelands, submerged lands, public trust lands, and lands within 100 feet of any wetland, estuary, or stream. (PRC §30601(2)) Other areas of the project site located within the coastal zone are subject to the CDP authority of Monterey County, pursuant to the County's certified Local Coastal Program (LCP).

1-2

The project therefore requires a CDP from the Coastal Commission for project activities located seaward of the mean high tide line and within 100 feet of a wetland, as well as a CDP from Monterey County for project activities located in the coastal zone landward of the mean high tide line. Because the project requires a permit from the US Army Corps of Engineers, a consistency certification must also be obtained from the Commission, pursuant to Section 307(c)(3)(A) of the federal Coastal Zone Management Act. Table 1-1 should be updated to reflect this information.

Section 2.4: Environmental Compliance Inspection and Mitigation Monitoring

3. The last bullet point on page 2-26 states: "A site-specific Spill Prevention Control and Countermeasure Plan will be developed and approved prior to and implemented during all cable laying and operation/maintenance activities." The plan should be developed prior to finalizing the EIR/EIS. The plan should address potential oil and/or fuel spills from all project activities, both onshore and offshore. The contents of the plan should inform the analysis of potential impacts to the marine environment from fuel spills (see, for example, Impact MBR-5 on page 4.5-26, Impact MBR-8 on page 4.5-28, Impact MAR-3 on page 4.6-12).

1-3

Section 2.5.2: Repairs and Maintenance

4. Beginning with line 24 on page 2-29, the document discusses periodic inspections of the cable and repair strategies. Please provide details concerning how often the cable will be surveyed, how it will be surveyed, and what portions of the cable will be surveyed. In past offshore fiber optic cable projects, the Commission required that each cable be surveyed in full, to the edge of the continental shelf, to verify that buried segments of cable remain buried. To mitigate for potential impacts that would be caused if the cable becomes unburied, we suggest the final EIR/EIS require periodic surveys (described in detail) and reburial, if necessary, as part of the Mitigation Monitoring Plan.

1-4

Section 4.2: Commercial and Recreational Fishing

5. The discussion of Impact CFR-1 on page 4.2-13 indicates that fishing vessels will be precluded from the area around the cable lay vessel during cable lay (and presumably removal) operations. Please describe how the applicant will notify mariners of the preclusion zone and schedule for cable lay and removal operations.

1-5

6. The discussion of Impact CRF-2 on pp. 4.2-14 to 4.2-15 describes the possible impacts of cable operations on commercial fishing; specifically, 1) that equipment may get snagged on the cable, and 2) that the presence of the cable may discourage fishing in the area, effectively creating a "preclusion zone" that lasts the life of the cable. Section 30234.5 of the Coastal Act specifically recognizes the economic importance of fishing activities, and mandates its protection. To satisfy this Coastal Act policy, we recommend that the final EIR/EIS require the applicant to (1) bury the cable to the extent feasible to avoid interfering with commercial fishing that occurs in the project area, and (2) develop a protocol for compensating fishermen if fishing gear accidentally becomes entangled with and lost or damaged due to the presence of unburied cable.¹ The Final EIR/EIS should require these measures as part of its Mitigation Monitoring Plan.

1-6

Section 4.3: Cultural Resources

7. Please explain why the cultural resources data in Appendix E is confidential. Is it necessary for **all** the information to remain confidential, or can some be released to the public for agency review?
8. Mitigation measure MM CR-1 discussed on page 4.3-8 suggests that the applicant should review existing data from the sub-bottom profile and avoid any potential archeological sites. Commission staff believes that the data should be reviewed as part of the environmental analysis, not afterwards, as the presence of archeologically sensitive areas along the cable route could significantly alter the impacts analysis. Please review the sub-bottom profile data prior to the release of the final EIR/EIS, and incorporate the data in that document's analysis.

1-7

1-8

Section 4.4: Geology

9. The cable is being installed across at least two active fault zones, and in proximity to areas known to harbor high-velocity turbidity currents. Faulting, resultant sliding and slumping, liquefaction, and turbidity currents all have the capacity to damage the cable, and are not fully mitigated by the location chosen for the cable. However, since one purpose of the cable is to allow study of just these phenomena, it is not feasible to locate the cable to avoid these hazards.

1-9

Disruption of the cable by surface rupture of the fault could be mitigated if the cable is laid on the surface in fault zones, in a Z-shaped pattern to provide slack that would be taken up during a major earthquake along the fault. Please include a discussion of this mitigation measure in the final EIR/EIS, and analyze whether the advantages of this

¹ In other offshore cable projects approved by the Coastal Commission, applicants negotiated with affected fishermen a "Fishing Agreement" that includes protocols for accepting and reviewing claims, compensating fishermen for gear loss or damage, and a path to mediation and/or arbitration if a dispute arises between a cable operator and a fisherman.

mitigation measure would be offset by an increase in impacts related to surface-laying the cable in these areas.

1-9,
cont.

10. The DEIR/DEIS acknowledges that sandy, unconsolidated sediments exist in the area where Horizontal Directional Drilling ("HDD") is proposed, and that these sediments pose a high risk for inadvertent return of drilling fluids to the surface ("frac-out"). The document does not, however, contain detailed information mapping these geological units and the depth to bedrock. Please include the following information in the final EIR/EIS:

- Geological information from at least three borings--one at either end of the bore, and at least one in the middle. This may not be practical for ocean bores
- If necessary, additional work (seismic reflection, seismic data, ground penetrating radar, etc.) to further characterize the stratigraphy along the proposed bore.
- Recommended drilling horizons; recommendations on possible use of casing at entry bore
- A geologic cross section based on the above data, showing the proposed bore
- Discussion of special drilling conditions that may be encountered (cobbles, unconsolidated sands, etc.)
- Discussion of existing fractures, and recommendations on how to minimize risk of inadvertent return of drilling fluids to surface
- Any other geological information that would help the drilling contractor avoid frac-outs; and recommendations for minimizing the risk of a frac-out

1-10

Some or all of this information may be contained in the separate document "Shore Landing Options and HDD Documentation," however please include it in the final EIR/EIS. This information will be a requirement of a coastal development permit for the bore.

The Coastal Commission, pursuant to sections 30230, 30231, and 30253 of the Coastal Act, routinely requires HDD operations to be undertaken in such a way as to minimize the risk of a frac-out. The Commission will likely require that the HDD bore maintain a minimum depth of 100 feet below the ocean floor at all points, except near the bore entry and exit points. These depths should be measured relative to the ocean floor, not sea level.

Section 4.5: Biological Resources

11. Please indicate if cable-laying operations will be conducted during nighttime hours. If so, please describe how marine mammal monitors will detect marine mammals after dark, before the animals enter the safety zone. Please provide more detail concerning the protocols that will be followed by marine mammal monitors.
12. The document does not describe a protocol to be followed in the case of an accidental injury or other take of marine mammals. Please develop a reporting and recovery protocol, describe it in the document, and include the protocol in the document's analysis of potential impacts to marine mammals.

1-11

1-12

3. Response to Comments

CCC Comments on MARS Draft EIR/EIS
April 6, 2005
Page 5

13. "Ghost nets" – nets that have been abandoned because they have snagged on the cable – can become an entanglement hazard to marine life. Please develop a protocol for retrieving fishing gear that has become entangled in the cable and subsequently abandoned. The protocol should specify a timeframe within which gear retrieval will be attempted, and should be incorporated into the Mitigation Monitoring Plan. 1-13

Impacts to Hard bottom Habitats (pp. 4.5-20 to 4.5-21)

14. Please estimate the total square footage of hard bottom habitat that will be impacted by the project. 1-14

15. Please indicate if the cable will be suspended at any location along the proposed route. If so, please describe the anticipated length and height of the suspension. 1-15

16. Please indicate if the cable is likely to move in areas where it will not be buried. If so, please indicate the amount of anticipated movement (in total square feet) and any impacts strumming will have on the local environment. 1-16

17. On page 4.5-20, line 27, the document states: "Careful installation and post-lay inspection/adjustment of the cable, particularly in high-relief areas, to ensure appropriate slack and following of bottom contours would ensure minimal disturbance of hard bottom habitat." Please be more specific regarding what measures will be implemented to avoid or minimize suspended cable segments and disturbance of hard bottom habitat. 1-17

Impact MBR-3: Collision with a Marine Mammal (page 4.5-24)

18. Line 26 states: "Following the injury of [a] grey whale calf, a cable research report was produced that included recommendations from marine mammal monitors [regarding] additional measure to reduce the chances of injury to marine mammals during cable installation." Please provide a citation for this report, and summarize the recommendations contained in it. Please indicate if any or all of the recommendations have been incorporated into the proposed project, and if not, why not. 1-18

Impact MBR-4: Disturbance of Marine Mammals by Noise or Cable Lay Operations

19. We suggest you re-title this section as "Impacts to marine mammals from noise associated with project activities." Project activities that could potentially cause noise-related impacts to marine mammals include, at least, cable-lay operations. No data is provided in the document regarding potential noise impacts from other project activities, such as HDD. Please indicate if other project activities, including HDD, will generate noise that could a) be transmitted underwater, and/or b) be sufficiently high level to cause impacts to marine mammals. 1-19

20. Figure 4.5-2: Expected Seasonal Occurrences of Marine Mammal Species Along the Cable-Laying Path, on page 4.5-10, indicates that both Cuvier's beaked whale and 1-20

CCC Comments on MARS Draft EIR/EIS
 April 6, 2005
 Page 6

Hubb's beaked whale could be present along the proposed cable route during cable laying activities. The potential impact of noise on these two species has not been analyzed in the document. Please describe the behavior of these species relevant to potential noise impacts. How deeply and for how long do these species dive? How likely is it that the on-board monitors will detect individuals of these species before they enter the 500-foot safety zone, especially in very deep water?	1-20, cont.
21. Please characterize in more detail the noise produced by the plow. What is the sound frequency range produced by the plow? What will be the noise attenuation at 500-feet – the proposed limit of the safety zone?	1-21
22. In deep water, how will marine mammal monitors detect deep- and/or long-diving whales before they enter the safety zone?	1-22
23. Two types of whales are of special concern when reviewing potential impacts due to the noise associated with the plow: deep- and/or long-diving whales, and those animals especially sensitive to the particular type of noise produced by the plow (for example, whales with a special sensitivity to low-frequency sound, if this is the type of sound produced by the plow). This section of the document should identify which species of whale falls into each category, and describe potential impacts and mitigation measures to ensure that these species will be protected.	1-23
Section 4.6: Marine Water Quality	
24. The Coastal Act and the Marine Sanctuary regulations should be included as part of the regulatory framework discussed in this section.	1-24
25. Increases in turbidity can degrade water quality by, among other things, interfering with filter-feeding benthic organisms sensitive to increased turbidity. Please identify any filter-feeding benthic organisms present at the project site that may be adversely impacted by increases in turbidity.	1-25
26. Please indicate if any sediment that will be re-suspended by project activities may be contaminated with DDT, PCBs, and/or heavy metals. If so, please analyze the impacts re-suspending these sediments might have on water quality and the benthic environment.	1-26
27. As discussed in Comment #3 above, please develop an Oil Spill Prevention Plan and include it in the final EIR/EIS. The plan should identify the reasonable worst-case discharge, oil spill prevention measures, and procedures to be followed in the event of an accidental spill. If the applicant intends to enter into a contract for on-water containment and recovery, this fact should be included in the document's analysis.	1-27
Other comments:	
28. The document does not discuss potential impacts to public access and recreation. Please provide a description of typical on- and offshore recreational activities (e.g., boating,	1-28

3. Response to Comments

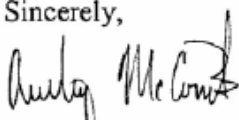
CCC Comments on MARS Draft EIR/EIS
April 6, 2005
Page 7

kayaking, swimming) in the area surrounding the project site. Please inventory public access to the beach in the area, as well as public parks, open space, etc. Please analyze whether project activities have the potential to adversely impact public access and recreation, either temporarily during construction activities or over the long-term operation of the project.

1-28,
cont.

Please feel free to contact me if you have any questions regarding this letter. I can be contacted by mail at the letterhead address, by phone at (415) 904-5249, and by e-mail at amccombs@coastal.ca.gov.

Sincerely,



Audrey McCombs
Analyst, Energy and Ocean Resources Unit

RESPONSE TO COMMENT SET 1: CALIFORNIA COASTAL COMMISSION

Letter dated April 6, 2005

1-1. Required approvals, including actions from federal agencies, are listed in Table 2.7-1 of the Draft EIR/EIS. In addition, applicable federal, State, regional, and local regulations are described in the “Regulatory Setting” discussions within each impact area in Sections 4.1 through 4.9, respectively, of the Draft EIR/EIS. The scope of Section 1.4 has been revised and content added to provide the suggested information at this location. Please refer to Section 4 of this document.

1-2. The information provided in the comment on the Coastal Act and CDP authority has been added to Section 1.4.6 within Section 4.

1-3. The bulleted items listed in Section 2.4 of the Draft EIR/EIS are measures that the Applicant has committed in their applications to the Lead Agencies to implement to avoid or minimize potential environmental impacts during installation and operation of the proposed Project. Therefore, they were considered, for purposes of the environmental analysis, to be part of the description of the Project.

A spill prevention plan already exists for the cable laying vessel *Ile de Ré*. This plan, referred to as a Non-Tank Vessel Contingency Plan, describes procedures to be followed in the event of a spill from the vessel and has been approved by the U.S. Coast Guard. A copy of this plan was submitted with the application for the proposed Project and was used by the EIR/EIS preparers in the evaluation of project impacts. Unfortunately, this plan was too large to append to the Draft EIR/EIS. In addition, the Applicant’s HDD contractor prepared a plan entitled “Drilling Fluid Monitoring and Remediation for Horizontal Directional Drilling”, which is included in Appendix H of the Draft EIR/EIS.

1-4. The proposed Project, if approved, will be governed by the same monitoring requirements as are within existing fiber optic cable leases with the California State Lands Commission (CSLC). Such leases provide: 1) within 90 days of acceptance by the Lessee of the work as complete from the contractor, a copy of a Post Lay Burial Report and as-built cable coordinates; 2) initial re-survey of cable burial within 18-24 months of cable installation; 3) a second re-survey of cable burial within 18-24 months of the completion of the initial re-survey; and 4) continuing re-surveys of cable burial at intervals to be determined by the CSLC

1 based on the results of the two initial re-surveys. In addition, the leases provide
2 for additional inspections of the cable that would be conducted, irrespective of
3 time intervals, under specified conditions, e.g., subsequent to a seismic event
4 and upon confirmation that fishing gear has become entangled with the cable.
5 Cable monitoring requirements would be conditions on permits issued by the
6 Lead Agencies.

7 1-5. Please refer to Section 4.7.2 of the Draft EIR/EIS that describes the means of
8 notifying mariners of the cable laying activities, including publication of a notice in
9 the U.S. Coast Guard's *Local Notice to Mariners*. In addition, the Applicant will
10 notify the Moss Landing Harbor District to ensure they are aware of the timing of
11 the cable laying operations and will work with the District to provide notice of the
12 cable laying operation to vessels that operate out of Moss Landing Harbor (see
13 Section 2.4 of the Draft EIR/EIS). Section 4.7.2 also describes Navigation Rules
14 that apply specifically to vessels with restricted ability to maneuver, which
15 includes cable laying vessels. For example, the Cable Act of 1992 (47 CFR §76)
16 states that other vessels must maintain a 1.15-mile (1-nm) separation from a
17 vessel laying or repairing an undersea cable. In addition, the International
18 Navigational Rules Act of 1977 (Public Law 95-75, 91 Stat. 308, or 33 U.S.C.
19 1601-1608) requires vessels restricted in their ability to maneuver to display
20 appropriate day shapes or lights.

21 1-6. The Applicant relied on detailed geophysical and burial assessment surveys
22 prepared by Fugro Seafloor Surveys, Inc. to select a route that maximizes cable
23 burial. Lines 24 through 35 of the Draft EIR/EIS provide information about the
24 percentage of the proposed route that would be buried (76 percent) and where
25 the substrate morphology of area prevents burial. Figure 4.2-2 on page 4.2-6 of
26 the Draft EIR/EIS shows the historical frequency of trawl intensity in relation to
27 the proposed cable route, including the unburied portions (yellow and red).

28 In areas where the cable cannot be buried by the plow, the cable would be laid
29 on the sea bottom and would be post-lay buried by jetting using a ROV, where
30 feasible. The post-lay inspection and burial program, described in Section 2.2.5
31 of the Draft EIR/EIS, is designed to maximize cable burial and to reduce the risk
32 to the exposed cable.

33 The Applicant and representatives of local fishermen's organizations have been
34 involved in discussions regarding the establishment of, for example,
35 reimbursement provisions for fishing gear that is lost or damaged by interactions

with the proposed cable. At the time of publication of this Final EIR/EIS, these discussions were still ongoing.

The two items mentioned in the comment, maximum feasible cable burial and reimbursement for lost or damaged fishing gear, would be addressed not in the Mitigation Monitoring Program but within the proposed lease from the CSLC. Burial of the cable (minimum 75 percent) is part of the Project description, and no significant impact has been identified that would require implementation of a reimbursement agreement as mitigation. However, the CSLC has made establishment of such an agreement a standard condition of lease approval for past submarine cable projects and anticipates that such a condition will be recommended for the proposed Project.

1-7. Under the National Historic Preservation Act, information about cultural resource sites may be withheld from the public if disclosures could pose a risk to the resource. Cultural resource site records are therefore typically not made available to the general public to avoid providing information that could lead the sites to be vandalized or plundered. However, this information may be made available to the professional archaeological community as well as permitting agencies. Permitting agencies, including the California Coastal Commission, are allowed access to the cultural resources site data upon request.

1-8. Mitigation Measure CR-1 would be implemented prior to construction as an action under the Mitigation Monitoring Program (MMP). While the probability of identifying an unknown, potentially significant archaeological resource along the proposed cable route is extremely low, Mitigation Measure CR-1 has been included in the EIS/EIR as a precautionary action to help ensure that no potentially significant impacts occur. These types of precautionary measures are common practice for cultural resource impacts in circumstances where there is no recorded evidence of a cultural resource site, but the potential exists for encountering a previously unknown site.

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires federal agencies to take into account the effects of their undertakings on historic properties, i.e., cultural resources that are listed in or potentially listed in the National Register of Historic Places, and afford the Advisory Council for Historic Preservation (ACHP) an opportunity to comment. By way of this EIR/EIS and two letters to the California State Historic Preservation Officer (SHPO), dated March 4, 2005, and May 4, 2005, the CSLC and MBNMS, as Lead Agencies for the proposed Project, have initiated consultation under Section 106 of the NHPA.

1 The SHPO reference number for the Project is NOAA050527A as allowed under
2 36 CFR Part 800.8(c), Use of the NEPA process for section 106 purposes. The
3 Lead Agencies will follow the guidance provided by the ACHP and SHPO
4 regarding this potential impact.

5 1-9. The U.S. Geological Survey (USGS) calculates that the average geologic slip
6 rate on the San Gregorio Fault is about 5 mm/year; however, this is very
7 uncertain because the outcrops are all underwater and offset is hard to date. In
8 its worst-case scenario, the USGS indicates that the largest magnitude
9 earthquake that could strike this fault would be 6.8 on the Richter scale. The
10 probability of an earthquake of this magnitude over the entire lifetime of the
11 MARS cable is 8 percent. It is extremely difficult to calculate the amount of slip in
12 the event of earthquake because it depends on the slip distribution along the
13 fault, e.g., uniform along the entire 27.3-mile (44-km) rupture length or
14 concentrated in a small area that would unfortunately coincide with the location of
15 the cable. On average, 1.6 feet (0.5 meters) of slip would be expected if the
16 entire fault were to rupture and the slip was evenly distributed along the entire
17 length.

18 In the fault areas where the cable cannot be buried, the slack provided to
19 minimize suspensions would readily accommodate a 1.6-foot (0.5-meter) fault
20 slip. In fault areas where the cable can be buried, the risks of making a surface
21 loop that could entangle fishing gear while attempting to install a Z-shaped
22 section of buried cable is more unacceptable than assuming the 8 percent risk of
23 such an event affecting the buried cable over the lifetime of the Project. Cable
24 loops may also increase the potential for entanglement by marine mammals.

25 1-10. As discussed in Section 4.4.4 of the Draft EIR/EIS, shallow seismic reflection
26 data indicate that nearshore sediments in Monterey Bay consist of weakly
27 consolidated sands and unconsolidated sands and gravels, which could be prone
28 to frac-outs. The Draft EIR/EIS acknowledges that although there is a potential
29 for an inadvertent release of drilling fluids to occur, no significant impacts to
30 marine resources would be expected. Notwithstanding, the tentatively proposed
31 drilling depth of approximately 50 feet (15 meters) below the seafloor has been
32 chosen to hinder the release of drilling mud to the surface while remaining above
33 relatively unknown subterranean sediments or rock formations that would
34 adversely affect HDD operations and that may occur at greater depths.

35 Subsequent to the publication of the Final EIR/EIS, the Applicant provided
36 additional information to the Coastal Commission on May 26, 2005, to support

1 the proposed drilling depth in response to a letter from the Coastal Commission
2 identifying the need to provide additional geotechnical information for the
3 proposed drill alignment. The material provided by the Applicant included a
4 review of current geologic information of the Monterey Bay, a review of numerous
5 geotechnical investigations, an inspection of seismic reflection data from the area
6 overlying the proposed drill alignment, and the results of engineering discussions
7 with the proposed drilling contractor Environmental Crossing, Inc.

8 The review conducted by the Applicant's registered engineer identified that the
9 headward portion of the drill alignment consists of aromas sands, purisma
10 sandstone, alluvial deposits, and marine sediments. Under the proposed drill
11 depth, the drill head would be located in alluvial deposits and aromas sands.
12 These materials do not fracture when impacted by drilling augers. On June 17,
13 2005, the Applicant indicated that a preliminary review of the material by Coastal
14 Commission geologist Mark Johnson found that the proposed drill depth was
15 acceptable.

16 The proposed drilling depth is also similar to other HDD operations completed
17 along the California coastline at a borehole depth of 50 feet (15 meters) below
18 the seafloor. Recent, successfully completed HDD projects along the California
19 coastline include AT&T (China U.S. and Japan U.S.), Global West, and
20 Tyco/Hermosa Beach. These projects resulted in very limited, small quantity
21 frac-outs, e.g., less than one barrel, or 42 gallons, of released drilling mud.
22 Intensive monitoring on these projects, similar to that for the proposed Project,
23 resulted in immediate cessation of drilling, complete dispersal of the frac-out
24 plume within several hours, and successful completion of the bore.

25 In addition, as further discussed in Section 4.6 of the Draft EIR/EIS, the analysis
26 conducted in the Draft EIR/EIS (Impact MAR-2) indicates that no significant long-
27 term impacts on water or sediment quality would occur as a result of an
28 inadvertent release of drilling mud into the environment. The potential for
29 significant losses of drilling fluids to the environment would be further minimized
30 through several measures that are described in Section 2.2.6, Section 2.4, and
31 Appendix H of the Draft EIR/EIS.

32 The "Shore Landing Options and HDD Documentation" report was developed by
33 the Applicant's HDD contractor as a description of the steps to be undertaken in
34 HDD for the proposed Project. The information from this report was incorporated
35 into the Draft EIR/EIS in Section 2.2.6.

1-11. As described in Section 2.3, cable-laying operations will occur 24 hours per day. During nighttime cable-laying operations, marine mammal monitors will make observations using low-light binoculars and night vision equipment. All the protocols for marine mammal observations during cable installation and removal activities will be contained in the Marine Mammal Monitoring Plan to be developed by the Applicant. The development and implementation of the Marine Mammal Monitoring Plan has been added to Section 6.5 of the Draft EIR/EIS in Table 6.5.2, Monitoring Program for Applicant-Proposed Mitigation Measures.

1-12. If a marine mammal is injured, the 24-hour marine mammal rescue line for Monterey County of the Marine Mammal Center shall be called to summon trained professionals in marine mammal care and rehabilitation. That number is (831) 633-6298. If a marine mammal is killed, MLML shall be contacted at (831) 771-4422. These entities report marine mammal injuries and deaths to the National Marine Fisheries Service (NMFS) on a monthly basis. However, the NMFS stranding coordinator, Joe Cordaro, also should be informed at the time of the incident. His direct phone number is (562) 980-4017. The Applicant has also indicated that prior to cable installation, MBARI will meet with the local marine mammal rescue society, inform them of its plans, and discuss points of contact and procedures to be followed in case of an accident. These procedures and all other protocols required by the State and federal authorities will be contained in the Marine Mammal Monitoring Plan (see the response to Comment 1-11 above and Section 4).

1-13. According to the Applicant, if fishing gear were entangled with the cable, the Applicant would, within three days, attempt to attach a recovery line to the snagged gear using its remotely operated vehicles (ROVs). If the ROVs are unsuccessful, the location would be marked with a buoy to allow a vessel with a winch to recover as much of the gear as possible for disposal. The timing of actual recovery by vessel would depend on the schedule of the Applicant's two winch-equipped vessels, the *Western Flyer* and *Point Sur*. Recovery would be accomplished within one month. If fishing gear were entangled with the cable in such a way that there was a probability of significant damage to the cable if a recovery were attempted, and all efforts to disentangle the cable failed, the fishing gear would be left in place, but rendered incapable of continuing to harvest marine resources.

1-14. As described on page 4.5-7 of the Draft EIR/EIS, the amount of hard bottom along the cable route (where burial is infeasible) totals approximately 5.6 miles (9 km or 18 percent of the route. This does not include an additional 1.8 miles (3

km) of dense sand and mixed bottom where only partial burial is feasible. However, if the 1.8 miles (3 km) of dense sand/mixed bottom is also considered to be “hard bottom,” i.e., infeasible for cable burial, and added to the 5.6 miles (9 km) of hard bottom, this would result in a worst-case estimate of 7.4 miles (12 km) of “hard bottom.” The potential for cable movement, i.e., strumming, would only occur in areas where the unburied cable is proposed to be placed on hard bottom ocean floor areas. Since the cable is 1.1-inch (2.8-cm) wide and assuming surface laying of the cable in these areas, the total square footage of habitat that might be affected by strumming would be 3,617 square feet (0.08 acres). For the reasons stated in Response 1-15 below, strumming would be minimized in these areas.

1-15. There are several scarps leading onto Smooth Ridge where the sediment hardness would not allow the cable to be buried. The cable route has already been selected to minimize the number and height of these scarps based on the video surveys made by MBARI in 2003. The scarps, numbering between 30 and 40, are between 1 foot and 4 feet (0.3 - 1.2 meters) in height. MBARI has indicated that it would utilize state-of-the-art cable-laying practices to minimize the potential for strumming and suspension of the cable at these locations by providing slack during the cable-laying process. The cable-laying vessel has dynamic positioning capabilities and is able to maintain appropriate tension for controlling the plow and laying the cable. The plow is steerable and equipped with sensors, a sonar system, and forward lighting and television. Software is used to model the curve of the cable and estimate the required slack. The installation methods proposed for this Project also include the use of ROVs to move the cable into more “favorable” positions in hard bottom areas and the careful addition of slack in the cable to avoid or minimize suspensions (see Section 2.4 of the Draft EIR/EIS). In addition, the post-lay inspection and burial (see Section 2.2.4 of the Draft EIR/EIS) would confirm the condition of the entirety of the cable after initial installation and use a ROV to attempt burial by jetting in locations where the plow could not accomplish cable burial.

1-16. In areas representing hard bottom habitat where burial would not be feasible (see response to Comment 1-14), some small-scale movement is possible (Kogan et al. 2003). The most comparative data available to estimate effects of strumming for cable placed on hard bottom ocean floor areas is provided in Kogan et al. (2003) for the ATOC cable project off Half Moon Bay (central California). Based on observations of unburied cable from Kogan et al. (2003), the worst-case estimate for strumming is up to 15.7-inches (40-cm) in width. This would equate

to 51,339 square feet (1.18 acres) over the 7.4 miles (12 km) of hard bottom and dense sand/mixed habitat along the MARS cable route. However, it is unlikely there would be substantial cable movement associated with the MARS cable. This is based on the current AT&T post-installation survey of their fiber optic cables off California. Results of recent AT&T surveys indicate that their fiber optic cables (buried and unburied) have not moved since they were installed in 2000. In addition, the MARS cable will be placed in an area of reduced wave action compared to the ATOC cable. Further, the weight and negative buoyancy of the MARS cable, coupled with the fact that most of the cable would be buried, would further reduce the potential for lateral movement.

1-17. Although there are no industry standards that dictate a specific approach to cable installation, the proposed Project cable installation methods proposed are state-of-the-art. In order to minimize the potential for cable suspensions, the use of ROVs is proposed to move the cable into more “favorable” positions in hard bottom areas, and to carefully provide, where necessary, additional slack in the cable to avoid or minimize potential suspensions (see Section 2.4 of the Draft EIR/EIS). As documented by the ATOC cable project (Kogan et al. 2003), unburied cable in hard bottom areas will sometimes have a range of suspensions from scales of centimeters to meters or several meters. However, the proposed MARS cable installation methods would minimize to the extent technically feasible and, where possible, eliminate the number of cable suspensions.

1-18. The citation for the report is:

Burton, Robert K. and J.T. Harvey. 2001. Preliminary report and second report of observations of an injured gray whale encountered while monitoring FOC laying operations at Morro Bay, California. Prepared for CCC, CSLC, NMFS, and San Luis Obispo County, California. January 11 and January 25.

After the incident, the observers recommended that more than one marine mammal monitor be on each vessel to provide better communications and a 360 degree view of the work area. This recommendation has been incorporated into proposed Project (see Section 2.4 of the Draft EIR/EIS).

1-19. Please see Impact NOI-1 on page 4.8-5 of the Draft EIR/EIS. As indicated, HDD activities on land will not transmit underwater noise.

1-20. Both the Cuvier's beaked whale and the Hubbs' beaked whale are extremely rare in the project area (Harvey 2004). Therefore, the probability that they would

come close enough to cable-laying activities to be disturbed by the noise of the plow during the 11 to 14 days that cable laying would occur is extremely low. Cuvier's and Hubbs' beaked whales are deep diving, but relatively little is known about these species. Beaked whales are known to dive to depths of 200 and 2,000 meters. Cuvier's beaked whales off California are generally found in water at least 1,000 meters deep. However, the EIR/EIS preparers could find no specific information about how deep and how long these species dive and suspect it is unknown. Also, no specific information is known about their sensitivity to anthropogenic noise such as would be produced by the proposed cable laying activity. Reaction of toothed whales to anthropogenic noise is variable, and is often dependent on the location, species, age-class behavioral activities and a host of other factors (Richardson et al 1995). Information about the specific effects of noise on beaked whales' behavior is extremely limited and nothing is known specifically about effects on Cuvier's and Hubbs' beaked whales. Most beaked whales appear to be "shy" around vessels and may actively avoid them. Such avoidance behavior may be beneficial because it would reduce the possibility of interactions with cable-laying operations.

1-21. The noise that would be produced by the plow is described on page 4.8-6 (lines 12-14) of the Draft EIR/EIS. The plow would cause a noise level of about 185 decibels (dB) at low frequencies (between 100 and 400 Hertz). Based on available scientific evidence, acoustic harassment of marine mammals is not expected to occur at a sound level below 160 dB. This level has been adopted by the NMFS as an acceptable level of impulsive underwater sound for the protection of marine mammals. The noise of the plow would be expected to attenuate to 160 dB within 100 feet (30.5 meters). The noise level near the 500-foot (152.4-meter) limit depends on the exact depth because noise dissipates more in deeper water. In water less than 500 feet (152.4 meters) deep, the noise level at the 500-foot (152.4-meter) distance from the source would attenuate to about 153 dB and in deeper water it would be about 145 dB. Therefore, marine mammals outside of the 500-foot (152.4-meter) safety zone would not be subjected to acoustic harassment from cable laying operations.

1-22. It is possible that marine mammals that spend a long time underwater could enter the safety zone without being detected by the marine mammal monitors, although deep-diving marine mammals most likely would avoid the work area (M. DeAngelis, National Marine Fisheries Service, personal communication, May 9, 2005). Sonar would be used during the cable installation, which may help to detect deep-diving marine mammals should any enter the area. We know of no

1 additional practical measures that, in addition to those proposed by the Applicant
2 or listed as mitigation in the Draft EIR/EIS, would improve the ability of the
3 observers to detect deep-diving marine mammals. The Marine Mammal
4 Monitoring Plan will include the most efficient way to safely monitor marine
5 mammals in the project area during installation and removal activities. Although
6 hydrophones possibly could be used to aid in the detection of deep diving marine
7 mammals, they would only be effective if the mammals were making noises.
8 Therefore, the use of hydrophones would not be expected to afford additional
9 protection beyond the mitigation measures proposed.

10 1-23. Baleen whales are thought to be the most sensitive to low frequency sounds.
11 Baleen whales in the project area include blue whale, fin whale, sei whale, minke
12 whale, Bryde's whale humpback whale, and gray whale. Deep-diving whales that
13 may be in the project area include blue whale, fin whale, Bryde's whale,
14 humpback whale, Pacific right whale, sperm whale, pygmy sperm whale, Baird's
15 beaked whale, Cuvier's beaked whale and Hubbs' beaked whale. As indicated in
16 Impact MBR-4 on page 4.5-25 of the Draft EIR/EIS and Response 1-21 above,
17 the marine sounds generated by the proposed Project, regardless of frequency,
18 will be below the National Marine Fisheries standard outside of the proposed
19 500-foot safety zone.

20 1-24. Information on the Coast Act and National Marine Sanctuary Program (NMSP)
21 has been added to the appropriate regulatory setting discussions in Section 4.6.2
22 in Section 4 herein.

23 1-25. Section 4.5 of the Draft EIR/EIS addresses marine biological organisms in the
24 project area. Along the Project route, there are two main feeding types of
25 organisms present that might be affected by turbidity and suspended sediments
26 from Project activities: filter feeders and suspension feeders. Over hard bottom
27 habitat, the most common organisms of these types include sponges, anemones,
28 sea fans, cup corals, basket stars, brittlestars, and feather stars. Over soft
29 bottom habitat, the most common organisms of these types are polychaete
30 worms, brittlestars, and sea pens. As detailed on page 4.5-21 of the Draft
31 EIR/EIS, impacts on organisms from turbidity would be short term and localized
32 and would not be different from naturally occurring events, such as bottom
33 feeding fishes and benthic invertebrates disturbing the sediment, to which these
34 organisms are typically exposed. Therefore, no filter-feeding or suspension-
35 feeding organisms would be significantly impacted from temporary exposure to
36 turbidity plumes or suspended sediments during installation or maintenance
37 associated with the proposed Project.

1-26. Hartwell (2004) showed that DDT (C₁₄H₉Cl₅) from terrestrial runoff has historically been found throughout Monterey Bay, and DDT and other persistent organic contaminants may be biologically available to deep benthic biota. As described on page 4.6-8 of the Draft EIR/EIS, cable installation activities would temporarily resuspend bottom sediments and create plumes. Contaminants associated with resuspended bottom sediments would remain attached to sediment particles, which would be expected to settle quickly to the seafloor. Plume duration at any one location would be temporary and is not expected to affect adjacent areas. Therefore, temporary resuspension of bottom sediments would not concentrate or increase the bioavailability of these contaminants.

1-27. Please see the response to Comment 1-3 above. On-water containment and recovery would be handled by Alcatel, the owner and operator of the *Ile de Ré*, who will be installing the cable for the Applicant.

1-28. In establishing the scope of issues to be addressed in the EIR/EIS, the Lead Agencies determined that the proposed Project did not have the potential to result in significant impacts on public recreation, either related to access or activities. Therefore, public recreation was not evaluated in detail in the Draft EIR/EIS. The reasoning for this determination is presented in Section 5.7, page 5-6 and 5-7, of the Draft EIR/EIS. The Draft EIR/EIS also discusses, in Section 4.7 beginning on page 4.7-1, the proposed Project's potential impacts on marine vessels, including "recreational vessels".

As to the proposed Project's potential effects on public access, the only shore activities required for construction are the HDD, installation of the Shore Facility, and installation of the cable connecting the Shore Facility to the MBARI facilities. All of these activities would occur within fenced property owned by MBARI that is not presently accessible to the public. Therefore, public access would not be altered under the proposed Project.

For Alternative Landing Area 1, additional shoreline disturbance would occur where the existing Duke Energy pipeline becomes exposed on the eastern side of the jetty located on Jetty Road at Moss Landing State Beach. Public access to a small area of the State Beach would be precluded during HDD for safety reasons associated with the drilling and cable pulling activities, which could last for up to one week. Other areas of the public beach would not be restricted during construction activities. Public access would be fully restored after cable installation.

1 For Alternative Landing Area 2, minor construction activity would be required to
2 land the cable at the MLML pier and install the cable in an onshore conduit to
3 bring the cable to the MBARI Building C, which would serve as the Shore Facility.
4 As the cable would be landed on the MLML pier, which is not open to public
5 access, rather than the shore, it is unlikely that public access to the shore in the
6 immediate vicinity of the MLML pier would be disrupted while landing the cable.

1 **COMMENT SET 2: MONTEREY BAY UNIFIED AIR POLLUTION CONTROL**
 2 **DISTRICT**



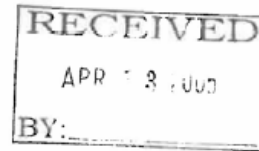
MONTEREY BAY

Unified Air Pollution Control District
 serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
 Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

April 11, 2005



Ms. Deirdre Hall, Project Manager
 Monterey Bay National Marine Sanctuary
 299 Foam Street
 Monterey, CA 93940

SUBJECT: DEIR/EIS FOR MONTEREY ACCELERATED RESEARCH SYSTEM
 CABLED OBSERVATORY (CSLC EIR No. 731)
 State Clearinghouse No. 200401511388

Dear Ms. Hall:

Staff has reviewed the referenced document and has the following comments:

1. Page 4.1-3. The federal 1 hour ozone standard was met in 1990, not 1994. 2-1
2. Table 4.1-3. The table should be updated with the following information: 2-2
 - State PM_{2.5} Standard - Attainment
 - State Ozone Standard - Nonattainment-Transitional
3. Page 5-2. The following criteria should be added to the list of significance criteria: 2-3
 - Conflict with or obstruct implementation of the applicable air quality plan.
 - Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
4. Table 4.1-4. The District's threshold of significance for SO_x is 150 lbs/day (District CEQA Air Quality Guidelines, Table 5-3.) The District's thresholds of significance for CO do not apply to the proposed project. Additionally, any potential violations of CO standards would occur off-shore and would not affect sensitive receptors. 2-4

The District's threshold of significant for PM₁₀ of 82 lbs/day applies to fugitive dust, not vehicle exhaust. (Please see pages 5-2 through 5-5 of the Districts CEQA Guidelines.) The finding in the EIR/EIS that the PM₁₀ exhaust emissions would have a significant impact on air quality should be deleted.

**DISTRICT
BOARD
MEMBERS**

CHAIR:
Lou Gallegos
Monterey County

VICE CHAIR:
Tony Campos
Santa Cruz
County

Anna Caballero
Salinas

Butch Lindsey
Monterey County

Ila Melles-
McCutcheon
Marina

Rob Monaco
San Benito
County

John Myers
King City

Dennis Norton
Capitola

Ellen Pirie
Santa Cruz
County

Jerry Smith
Monterey County

3. Response to Comments

- | | | |
|----|---|-----|
| 5. | <u>Page 4.1-7.</u> If sensitive receptors are located near the landing site where heavy duty diesel equipment would be operated, a diesel risk assessment may be needed. David Craft of the District's Engineering Division may be contacted regarding the need for such an assessment. He may be reached at the District by calling 647-9411 x218. | 2-5 |
| 6. | <u>Page 4.1-10.</u> Based on the District's CEQA Air Quality Guidelines, the project would have a significant cumulative impact because its emissions are not accommodated in the 2004 Air Quality Management Plan. | 2-6 |
| 7. | <u>Proposed Mitigation.</u> As described in the EIR/EIS, the proposed project would have a significant project level and cumulative impact on ozone levels. It would emit 5,260.1 lbs/day of NOx and 271.7 lbs/day of VOC during construction, exceeding the District's threshold of significance by 5,123.1 and 134.7 lbs/day, respectively. Proposed mitigation measures include use of CARB on-road diesel fuel in all smaller diesel-powered vessels and in all construction equipment, as well as contributions to the District's Moyer Program for off-site mitigation. | 2-7 |


The schedule for project construction is 10 to 14 days between September 1 and November 14, 2005. Another mitigation measure would include delaying construction after the end of the ozone season, i.e., November through April. If this were to occur, the project could be found to not have a significant impact on ozone levels.

If the project is to proceed during ozone season, contributions to the Moyer program for off-site mitigation would require a contribution to reduce project emissions to a less than significant level. Please contact David Fairchild at the District by calling 647-9411 x 234, to discuss mitigation measures and associated contributions. The lead agency would need to determine if that level of contribution meets the criteria for a feasible mitigation measure.

Please remember that even limited-term emissions that violate the thresholds of significance require mitigation.

Thank you for the opportunity to review the document. Please do not hesitate to call if you have any questions.

Sincerely,


Jean Getchell
Supervising Planner

cc: David Fairchild
David Craft

1 **RESPONSE TO COMMENT SET 2: MONTEREY BAY UNIFIED AIR POLLUTION** 2 **CONTROL DISTRICT**

3 Letter dated April 11, 2005

4 2-1. Thank you for the information. Page 4.1-3, line 12, has been revised to read:
5 "...after meeting the standard in ~~1994~~ 1990."

6 2-2. Thank you for the information. Table 4.1-3 on page 4.1-3 has been revised to
7 read: "State Designation: Ozone, Nonattainment-Transitional" and "State
8 Designation: PM_{2.5}, Attainment".

9 2-3. The second bullet of the significance criteria on page 4.1-5, line 29, has been
10 revised to read: "Project emissions exceed thresholds established by the
11 MBUAPCD for the determination of significance of air quality impacts for CEQA
12 purposes or the applicability thresholds of the Federal General Conformity Rule.
13 The MBUAPCD considers an impact significant if it would conflict with or obstruct
14 implementation of the applicable air quality plan, or result in a cumulatively
15 considerable net increase of any criteria pollutant for which the region is
16 nonattainment under an applicable federal or state ambient air quality standard
17 (including releasing emissions which exceed quantitative thresholds for ozone
18 precursors)." The additional language provides additional definition to the
19 affected significance criteria and provides a better context for the designated
20 impacts and mitigation.

21 2-4. Table 4.1-4 shows the emissions and thresholds of significance for short-term,
22 construction-type activities, as established by Section 5.3 of the local CEQA Air
23 Quality Guidelines and coordination with MBUAPCD staff. The 150 lb/day SO_x
24 threshold does not apply to the short-term construction activity of the Project
25 because this threshold only applies to operational impacts (as in Table 5-3 of the
26 CEQA Air Quality Guidelines). However, as with the effects of CO noted by the
27 comment, potential violations of SO₂ standards are similarly unlikely, due to the
28 off-shore location of the marine vessels. To clarify that Section 5.4 and Table 5-3
29 of the CEQA Air Quality Guidelines only apply to operational impacts, the notes
30 for the table of construction impacts are revised as follows.

31 The note below Table 4.1-4 on p. 4.1-7, line 19, has been revised to read:
32 "...established by Section 5.3 ~~and 5.4~~ of the local CEQA Air Quality Guidelines
33 (MBUAPCD 2004) and consultation with MBUAPCD staff (Brennan 2004)."

The clarification of the District's threshold of significance for PM₁₀ is acknowledged. However, the conclusions related to PM₁₀ are not revised because the guidelines as published and the relevant ambient air quality standards do not appear to distinguish between fugitive dust and exhaust emissions of PM₁₀. The Lead Agencies are concerned that inhalable particulate matter from either type of source could contribute to a significant impact. Mitigation measures identified for Impact AQ-1 would not only prevent PM₁₀ formation in equipment exhaust and in downwind ambient air reactions by requiring use of low sulfur fuels and NO_x mitigation, but are consistent with the District's recommendation in Comment 2-7, below.

2-5. Comment noted. The proximity of sensitive receptors was considered in the analysis of on-land construction equipment emissions. As noted in Section 4.8 of the Draft EIR/EIS, there are no homes or residences near the potential shore landing locations, but two State beaches, which are also considered sensitive receptors for both noise and air quality, are in closer proximity.

2-6. The significant cumulative air quality impact is identified on page 4.1-10 of the Draft EIR/EIS. As confirmed by the MBUAPCD in June 2005, and described on page 4.1-9, lines 18-23, the MBUAPCD would identify the level of funding necessary to address the impact in a manner consistent with the applicable attainment plan. The funding would be used to secure emission reductions from non-project sources that would be sufficient in quantity and timing to offset the effects of the Project emissions to ensure that emissions from marine vessels are reduced to levels consistent with the attainment plan. For clarity, the discussion of cumulative impacts is revised as follows.

Page 4.1-10, lines 17 to 20, has been revised as follows: "Because the Project emissions alone, including short-term emissions from marine vessels that are not accommodated in MBUAPCD's 2004 Air Quality Management Plan, would contribute substantially to existing violations during the short-term construction phase, the short-term impact (Impact AQ-1) would also be cumulatively considerable (Class II) and mitigation measures (MM AQ-1a and MM AQ-1b) would be necessary to reduce the impact to a less than significant level."

2-7. The comment notes that no significant impact on ozone would occur if construction occurs between November and April, and it suggests delaying construction of the Project until the close of the ozone season. As described in Section 2 of the Draft EIR/EIS, cable laying would only take place during good weather. This means that a portion of the Project activities could occur after the

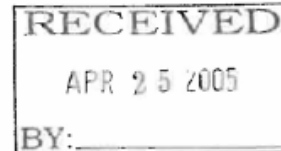
1 close of the ozone season, weather-permitting, although this is not the current
2 proposal. The analysis recognizes that the limited-term emissions caused by the
3 Project warrant mitigation and requires contribution to the mitigation program for
4 all ozone-related impacts. To clarify that schedule changes could help to mit-
5 igate the ozone impact, the NOx mitigation is revised as follows:

6 Mitigation Measure AQ-1b, on page 4.1-8, line 27, has been revised to read:
7 "...The amount of the contribution shall be agreed upon by the MBUAPCD taking
8 into account the limited duration and timing of cable-laying activities."

1 COMMENT SET 3: U.S. ENVIRONMENTAL PROTECTION AGENCY



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901



April 20, 2005

Deirdre Hall
NOAA's Monterey Bay National Marine Sanctuary
299 Foam Street
Monterey, CA 93940

Subject: Monterey Accelerated Research System Cabled Observatory Draft Environmental
Impact Statement (DEIS) [CEQ # 50093]

Dear Ms. Hall:

The Environmental Protection Agency (EPA) has reviewed the document referenced above. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

We have rated the Draft EIS as LO- (Lack of Objections) (see enclosed "Summary of Rating Definitions"). This document analyzes and mitigates for many of the project's environmental impacts. Although we have no significant environmental concerns with the project as proposed, we would like to reiterate the importance of continued coordination with NOAA Fisheries and the U.S. Fish and Wildlife Service to minimize or avoid any potential impacts. This project will be used as a test for specific technologies, remotely operated vehicle operations, and operational management systems that would eventually be used in the proposed North-East Pacific Time Series Undersea Networked Experiments (NEPTUNE) project. Therefore, it is important to comprehensively monitor and adaptively manage the impacts that may be associated with these technologies.

3-1

We note that Alternative 2 is the environmentally preferable alternative (ES-7). If a different alternative is selected in the Final EIS, the document should include a discussion of the factors leading to this decision. We also note that a Clean Water Act, Section 404 permit (CWA 404 permit) may be needed. If a CWA 404 permit is needed, it may be helpful to coordinate the selection of the proposed alternative with selection of the Least Environmentally-Damaging Practicable Alternative (LEDPA), as selection of the LEDPA is required under CWA guidelines (40 CFR Part 230).

3-2

Because of the importance of the Monterey Bay National Marine Sanctuary to marine mammals and the presence of Essential Fish Habitat, mitigation requirements by NOAA Fisheries and the U.S. Fish and Wildlife Service for construction and operation should be implemented for avoidance of adverse impacts. The Mitigation Monitoring Plan should include periodic monitoring of the buried cable to avoid impacts to marine mammals from the cable as well as a reporting and recovery procedure in the case that marine mammals are adversely affected. In addition, the FEIS should include a discussion of the implemented fishing agreement for commercial fisheries. If a fishing agreement is not established, the FEIS should address the conditions imposed by the California Coastal Commission to satisfy California Coastal Act requirements.

3-3

We also emphasize the importance of the air emissions mitigation measures as outlined in the DEIS, as this region is a maintenance area for the one-hour Federal ozone standard and other large projects are planned in the near future, such as the desalination plant in Moss Landing as well as multiple dredging projects. These projects may cumulatively impact air quality in the North Central Coast Air Basin. In addition, the document does not analyze noise impacts from project activities other than cable-lay operations. Analysis of these impacts should be included in the FEIS.

3-4

We appreciate the opportunity to review this Draft EIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CMD-2). Questions regarding this letter should be directed to Summer Allen, the lead reviewer for this project at (415) 972-3847 or allen.summer@epa.gov.

Sincerely,



Lisa B. Hanf, Manager
Environmental Review Office

MI# 004570

Enclosures:
Summary of Rating Definitions

1

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

¹ *From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

RESPONSE TO COMMENT SET 3: U.S. ENVIRONMENTAL PROTECTION AGENCY

Letter dated April 20, 2005

3-1. Comment acknowledged.

3-2. Alternative Landing Area 2 was identified in Section 4.10.2 of the Draft EIR/EIS as the “environmentally superior alternative” as defined by the State CEQA Guidelines (see page ES-7 of the Draft EIR/EIS); however, this does not necessarily make Alternative Landing Area 2 the “environmentally preferable alternative” for NEPA purposes. The environmentally superior alternative, as defined in the CEQA, only considers the alternatives to the proposed Project and not the project itself. Under NEPA regulations, the environmentally preferable alternative is selected from among the proposed action and the alternatives. The MBNMS did not identify an environmentally preferable alternative in the Draft EIR/EIS. The MBNMS agrees that the selection of the proposed alternative should be coordinated with the selection of the Least Environmentally Damaging Practicable Alternative in order to facilitate Section 404 permitting.

3-3. Please see Comment Set 6, herein, from NOAA National Marine Fisheries. Although the Section 7, Endangered Species Act process has not concluded, any lease given to MBARI by the California State Lands Commission will require the implementation of all mitigation specified in Section 4.5 of the Final EIR/EIS, as well as any additional mitigation that may be specified with the Section 7 Biological Opinion.

The Mitigation Monitoring Program presented in Section 6 of the Draft EIR/EIS sets forth a program for monitoring the mitigation measures contained in the EIR/EIS, as well as the measures identified by the Applicant to avoid or minimize potential environmental impacts (see Section 2.4 of the Draft EIR/EIS), which include measures for avoiding impacts on marine mammals. Please also refer to response to Comment 1-4 regarding cable monitoring requirements and response Comment 1-12 regarding injured mammal procedures.

At the time of publication of this Final EIR/EIS, discussions between the Applicant and local fishing industry representatives regarding, for example, reimbursement provision for fishing gear that is lost or damaged by interactions with the proposed cable were still ongoing. In addition, the California Coastal Commission will rely, in part, on the Final EIR/EIS to consider a CDP for the proposed Project. Therefore, the Coastal Commission will not consider the Project until after the Final EIR/EIS is completed and the CSLC has, as the

CEQA Lead Agency, taken its action on the proposed Project. The MBNMS will work with State agencies to implement necessary reimbursement provisions for fishing gear that is lost or damaged by the proposed cable. Please also refer to the response to Comment 1-6 herein.

3-4. Section 4.1.4 of the Draft EIR/EIS proposes mitigation measures that would reduce the proposed Project's emissions of ozone precursors and particulate matter to less than significant levels. As described in Section 4.1.5 of the Draft EIR/EIS, a significant, albeit temporary contribution to cumulative impacts would also be avoided with the implementation of these mitigation measures. Emissions for all other criteria pollutants would be below the significance thresholds established by the MBUAPCD without the implementation of Project-specific emission-reduction measures. Implementation of the mitigation measures contained in the EIR/EIS would be ensured by the Lead Agencies.

The Draft EIR/EIS analyzes noise impacts from cable-lay installation activities by the vessel as well as potential noise impacts associated with the planned HDD activities on shore. There are no other substantial noise sources associated with either Project construction or operation. Please see Section 4.8 beginning on page 4.8-1 of the Draft EIR/EIS.

1 COMMENT SET 4: MONTEREY COUNTY PLANNING AND BUILDING INSPECTION
2 DEPARTMENT

MONTEREY COUNTY

PLANNING AND BUILDING INSPECTION DEPARTMENT

☐ 240 CHURCH STREET, SALINAS, CALIFORNIA 93901 PLANNING: (831) 755-5025 BUILDING: (831) 755-5027 FAX: (831) 755-5487
MAILING ADDRESS: P.O. BOX 1208, SALINAS, CALIFORNIA 93902

☒ COASTAL OFFICE, 2620 1st Avenue, MARINA, CALIFORNIA 93933 PLANNING: (831) 883-7500 BUILDING: (831) 883-7501 FAX: (831) 384-3261



April 21, 2005

Ms. Michelle Brown
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825

**Subject: Comments on Draft EIR/EIS for the Monterey Accelerated Research System
Cabled Observatory**

Dear Ms. Brown:

Thank you for the opportunity to review and comment on the Draft EIR/EIS for the Monterey Accelerated Research System Cabled Observatory. Staff respectfully submits the following comments:

Alternatives to Proposed Project

1. Based on staff's comparison of the proposed Project's Landing Area Route with the two Alternative Landing Area Routes, Alternative Landing Area 2 (Moss Landing Marine Laboratories Pier) would best meet the policies and regulations contained in Monterey County's Local Coastal Program (North County Land Use Plan and Coastal Implementation Plan). Staff's understanding is that the proposed Project would involve the installation of a pipe via horizontal directional drilling (HDD) and the construction of a portable laboratory structure (ISO van) on an undeveloped parcel located at the end of Sandholdt Road (Assessor's Parcel Number 133-252-001-000). Staff prefers Alternative Landing Area 2 since it would involve minimal to no land disturbance (no HDD), would not involve the construction of additional new structures (ISO van) and would be located within an already developed parcel containing marine research facilities. Further, the California Coastal Commission recently approved a Coastal Development Permit to allow for construction of the Moss Landing Marine Laboratories Pier. **Staff requests that the proposed Project's Landing Area Route be replaced with Alternative Landing Area 2 (Moss Landing Marine Laboratories Pier).**

4-1

Monterey County Permitting Authority

2. The County has full permitting authority for developments within the coastal zone pursuant to its Local Coastal Program, which was certified by the California Coastal Commission.

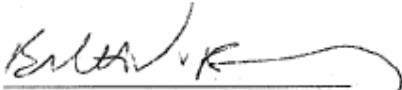
4-2

County permitting authority begins at the mean high tide line and extends landward. The Coastal Commission retains permitting authority over development occurring seaward of the mean high tide line (State Tidelands). Since the proposed Project and Alternative Landing Area Routes occur landward of the mean high tide line, this portion of the project would require Coastal Development Permit approval from Monterey County (Responsible Agency). **Staff requests that the EIR/EIS be updated to reflect Monterey County's Coastal Development Permit requirement.**

4-2,
cont

Thank you for the opportunity to provide input on this document. Please contact me with any questions you may have at: (831) 883-7563; or email at: beckerbc@co.monterey.ca.us.

Sincerely,



Brett C. Becker, Associate Planner
Monterey County Planning and Building Inspection

cc: Jeff Main, Planning and Building Inspection Manager

**RESPONSE TO COMMENT SET 4: MONTEREY COUNTY PLANNING AND
BUILDING INSPECTION DEPARTMENT**

Letter dated April 21, 2005

4-1. Thank you for providing an analysis of the proposed Project in relation to the policies of the County's Local Coastal Program and for stating your preference for the implementation of Alternative Landing Area 2. This information will be taken into consideration by the CSLC and MBNMS.

4-2. Thank you for the information on the County's permitting authority for the proposed Project. Tables 1.1 and 2.7-1 in Section 4 have been revised to reflect this information.

1 **COMMENT SET 5: ALLIANCE OF COMMUNITIES FOR SUSTAINABLE FISHERIES**

April 25, 2005

By email, facsimile, and Federal Express

Mr. Stephen L. Jenkins, Project Officer
California State Lands Commission
100 Howe Street, Suite 100-South
Sacramento, CA 95825-8202

Ms. Deidre Hall, Permit Coordinator
Monterey Bay National Marine Sanctuary
299 Foam Street
Monterey, CA 93940

RE: Draft Environmental Impact Report/Environmental Impact Statement;
Monterey Accelerated Research System (MARS) Cabled Observatory; SCH No.
200401511388; CSLC EIR No. 731; CSLC File #'s: W25980; W30156

Dear Mr. Jenkins and Ms. Hall:

On behalf of the Alliance of Communities for Sustainable Fisheries (the "Alliance" or "ACSF"), we are providing the following comments on the Draft Environmental Impact Report/Environmental Impact Statement ("DEIS") regarding the proposal to issue the necessary state and federal permits to the Monterey Bay Aquarium Research Institute ("MBARI")¹ to lay and operate a cable in Monterey Bay. We have been advised by Michelle Brown of the State Lands Commission, that the date for filing these comments has been clarified as the close of business, Tuesday, April 26, 2005, because of the mistake in the closing date set forth in the DEIS/EIR.

The goal of the Alliance is to support the fishing communities of the Central California Coast. Our comments are submitted on behalf of interested fishing groups whose members traditionally and regularly harvest fishery resources in Monterey Bay, including in the area that

¹ We understand that MBARI, a private research entity, is serving either as a contractor or grantee of the Federal government for purposes of this project. Also involved are the University of Washington, the Jet Propulsion Laboratory, and the Woods Hole Oceanographic Foundation. MBARI is affiliated with the Monterey Aquarium, a private institution that provides entertainment to the general public for an entrance fee, sells commercial products, and promotes certain environmental policies that are particular to that organization and that may not be consistent with policies set forth in State and Federal law and policy.

would be impacted by the proposed laying of an underwater cable as part of the MARS project. In fact, MBARI is a very recent addition to Monterey Bay, compared to the long history of utilizing the resources of this region by those who have depended on the sea for their way of life.

ACSF's interests are not simply limited to harvesting resources. The organization and its constituents have an abiding interest in preserving and protecting the Monterey Bay marine environment generally. A healthy marine environment supports strong fish stocks. Consequently, ACSF is vitally interested in making sure that the entire ecosystem remains healthy, including essential fish habitat, endangered and threatened species, marine mammal populations, water quality, and the water column and seafloor. Ecosystem management requires protection of all the unique environmental features of the Bay.

Project Description

The MARS project is publicly funded, by the National Science Foundation, as part of the Federal budget. What is proposed is the construction and operation of a lengthy (31.7 mile) submarine cable network that would impact the water and seabed on lands owned by the State of California and United States in an area designated by Congress and the National Oceanic and Atmospheric Administration ("NOAA") as so unique as to merit being named a marine sanctuary under the National Marine Sanctuaries Act, 16 U.S.C. § 1431 et seq. The project will consist of a set of underwater cables and "docking" stations, carrying power and high-speed data links in support of various oceanographic devices, which will include remote sensors, each of which could stretch as far as an additional 2.5 miles from the end of the cable. The power that will run the system is estimated at 10 kilowatts, or enough to "supply a small neighborhood."

It appears that the actual installation of the cable will be done not by an American company but by a French company, Alcatel, using a foreign-flag vessel, the M/V *Ile de Re*.² It appears that a sizeable trench, at least one foot wide (or probably more) and three feet deep, will be dug for an undisclosed distance. Based on the description in the DEIS (p. ES-4), it is not clear just how much of the cable will actually be buried but it is stated that about 5.6 miles, located on the seafloor edge of Bay that begins a steep vertical drop, will not be buried (DEIS; Figures 4.4-6 and 4.4-7). In addition, another portion inland of the unburied portion, of unknown length, would be "partially" buried. The cable would connect to a pipe located about .89 miles from shore, which ties it to the shoreside facilities on MBARI property. That portion of the system would be constructed using the same directional drilling techniques used by the offshore oil and gas industry.

5-1

ACSF is deeply concerned because the area where the cable will not be buried, or only partially buried, cuts across one of the most important fishing areas within and on the shelf of the Bay, an area critical to fishing and where bottom-trawling equipment is essential to success (DEIS; Figures 4.2-1 and 4.2-2). For this and other reasons, it would appear, the DEIS states that the only area of controversy the Applicant sees is the conflicts with local fishing activity that

5-2

² We presume that the use of this vessel will not violate U.S. cabotage laws with respect to coastwise trade, but do not know for sure. It is unfortunate, however, that this Federal project will not be using an American company and an American vessel for the work on the cable.

may catch and injure the cable. DEIS; p. ES-7. Contrary to the poorly documented statements in the DEIS, there is a significant risk that trawl doors from a working vessel will snag on the exposed cable, perhaps even on the area above the buried cable if the surface is not smooth. There is also a risk that deeper working trawl gear will snag on the terminal "nodes," notwithstanding that this part of the cable will be covered by a supposedly trawl-resistant cover. Other types of gear may be affected by the unburied and exposed part of the cable and its terminal "nodes."

5-2,
cont.

The Applicant has been in discussions with local fishermen's organizations in an attempt to put a Fisherman's Agreement in place that would specify the terms, procedures, and rules for providing compensation to any fishermen whose gear is damaged or lost if snagged on the MARS cable or science nodes. At the time of the filing of these comments on the Draft EIR/EIS, an acceptable Fisherman's Agreement has not yet been negotiated between the Applicant and the fishermen's organizations.

5-3

As of the writing of these comments, ACSF can confirm that no such agreement is in place, although a proposed agreement was presented to us by attorneys for the Applicant MBARI at approximately 3:30 p.m. on Thursday, April 21, 2005. This was the first time that MBARI put any kind of proposal in any real detail in writing.³ ACSF remains hopeful that a satisfactory agreement can be reached so that the conflict created by the proposed cable with traditional fishing activity will be addressed and resolved, to the extent possible. However, as of the filing of these comments, analysis and approval by our constituent groups is still ongoing. We are not confident that an arrangement can be worked out, given what we believe is a conflict of interest on the part of MBARI, as will be explained below.

Legal Status of the Submerged Cable

It is our understanding that MBARI is engaged in a project funded by the Federal government. While the purpose of the cable is explained (DEIS, at ES-1), the DEIS does not discuss at all the legal status of the cable. For example, is the cable owned by the Federal government or by the private institution MBARI? If it is owned by the Federal government, is any conflict with other legitimate uses of this part of the marine environment governed by laws applicable to activities of the Federal government, including sovereign immunity? A related question is whether MBARI would have any legal standing to seek damages should a fishing vessel inadvertently injure the cable.⁴ Could the fishing vessel seek damages against MBARI if the cable is either not properly buried or improperly marked? Will the cable be shown on navigation charts or made the subject of notices to mariners issued by the United States Coast Guard? Unfortunately, none of these issues are addressed in any meaningful manner in the DEIS, notwithstanding the concession that conflicts with fishermen are very possible. Quite

5-4

³ MBARI's attorneys have made the content of their letter subject to the protections of California law with respect to settlement negotiations, so ACSF will not disclose the terms of MBARI's proposal.

⁴ See *American Telephone & Telegraph Company v. M/V CAPE FEAR*, 967 F.2d 864 (3rd Cir. 1992) (Submarine Cable Act does not give private right of action to cable owners to recover for negligence against a fishing vessel).

clearly, MBARI is seeking to create an obstruction in areas known to be subject to fishing activity.

In general, it does not appear that construction and operation of submarine cables, as a matter of State and Federal policy, are favored activities in this particular coastal area. In fact, the regulations in force for the Monterey Bay National Marine Sanctuary bar such activities because they constitute “[d]rilling into, dredging or otherwise altering the seabed of the Sanctuary,” except pursuant to certain exceptions, none of which are relevant here. It does not matter if the cable is being installed for research or commercial purposes; submarine cables in Monterey Bay are barred by Federal regulation.⁵ 15 U.S.C. § 922.132(a)(4). Moreover, other far less intrusive remote sensing techniques are available to conduct the research contemplated here. However, use of such alternative non-intrusive research techniques, and avoidance of all the environmental impact, is not discussed to any meaningful degree in the DEIS.

5-5

5-6

One environmental group has said that “[m]any of the activities inherent to submarine cable installation, operation, repair, and removal are generally incompatible with the National Marine Sanctuary Program’s statutory objective of resource protection.” Correspondence from Kaitilin Gaffney, Ecosystem Program, Center for Marine Conservation (now called the Ocean Conservancy), to Matt Brookhart, National Marine Sanctuary Program, NOAA (March 21, 2001). ACSF agrees with that statement.

It is ACSF’s position that the MARS cable cannot be allowed under the National Marine Sanctuary Act without the issuance of a “special use permit.” 16 U.S.C. § 1441. No such permit can be issued for more than five years, unless renewed. In addition, it is mandatory that the permittee purchase and maintain comprehensive general liability insurance, or post an equivalent bond, against claims arising out of activities conducted under the permit and to hold the United States harmless against such claims, among other requirements. 16 U.S.C. § 1441 (c)(4). Without such a permit, the MARS project will violate Federal law. Fees may also be required, although a waiver of fees may be available for research activities.⁶ However, all “research” is not the same. Some methods of gathering scientific data are far less intrusive than others. For example, using explosives to gather geophysical data is more intrusive than other means. Here, the laying of the MARS cable, using oil and gas drilling methods and commercial cable laying equipment, is very intrusive, no different in kind from any other submarine cable. Congress intended that such activity apply for and obtain a special use permit.

5-7

Legal and Policy Status of Fishing in Monterey Bay

It is important to keep in mind that fishing activity, pursuant to applicable Federal and State law and policy, is a favored activity in Monterey Bay, and per se compatible with the

⁵ The only likely exception might be for national security purposes. However, the MARS cable appears to have no national security use.

⁶ See 65 Fed.Reg. 51,264 (Aug. 23, 2000) (Installing and Maintaining Commercial Submarine Cables in National Marine Sanctuaries); 66 Fed.Reg. 43,135 (Aug. 17, 2001) (Fair Market Value Analysis for a Submarine Cable Permit in National Marine Sanctuaries).

purposes of the National Marine Sanctuary established in the area.⁷ 16 U.S.C. §§ 1433(b)(1)(C) and 1434(a)(5). Fishing activities do not require the issuance of a special use permit to be conducted in the Sanctuary. Moreover, the California Coastal Act (Pub.Res.C. §§ 3001.5 and 30001.5) states that the basic goals of the State for the coastal zone include, among other things, maintaining access in the coastal zone and assuring a priority for coastal-dependent and coastal-related development over other development on the coast. See also, Pub. Res. C. § 30230 (maintenance of marine resources) and § 30234.5 (the economic, commercial, and recreational importance of fishing activities shall be recognized and protected).

5-8

For ACSF, supporting the fishing communities of the Central California coast while preserving and managing our fishery and other marine resources are our primary goals. These goals are established elements of Federal and California State coastal law, as well. A recent ruling by Third District California Court of Appeal confirmed, again, that the public's interest in fishing is firmly protected by the public trust doctrine in California. *California Earth Corps v. Calif. State Lands Commission*, 5 C.D.O.S. 3404 (April 25, 2005). The State holds the tidelands and submerged lands within state boundaries (including Monterey Bay) "in trust for public purposes, which have traditionally been delineated in terms of navigation, commerce, and fisheries." *City of Long Beach v. Mansell* (1970) 3 Cal.3d 462, 482.

NOAA's National Marine Sanctuary Program has also issued policy statements with regard to possible conflicts between submarine cables and the fishing industry that are instructive here. In discussing the issues raised by submarine cables, NOAA made the following observation in a 2000 Notice in the Federal Register:

Recognize the fishing industry's role as a distinct, critical and interested party in submarine cable issues. [NOAA would accomplish this by strongly encouraging the cable industry to initiate negotiations and develop agreements with marine and coastal resource user groups before their applications for permits and licenses are deemed complete for public review...]⁸

5-9

These observations apply with equal force to any submarine cable project because each one, whether for research or "commercial" purposes, creates the same kind of environmental impacts and possible conflicts with the fishing industry.

Commercial fishing is one of the most highly regulated activities in the United States. On the West Coast, the regulations adopted pursuant to the Magnuson-Stevens Fishery Conservation and Management Act strictly control fishing in the federal waters of the Sanctuary,⁹ as do comparable regulations issued and enforced by the State. Regulations for Pacific groundfish are

⁷ In contrast, Federal regulations for the Sanctuary currently prohibit the laying of any submarine cable system. 15 C.F.R. § 922.132(a)(4).

⁸ In this case, no such agreement was in place with the fishing industry before issuing the MARS proposal for public comment.

⁹ Fishery management regulations issued by NOAA-Fisheries govern fishing in the Sanctuary. Congress has stated that "special use permits" are not required to engage in fishing in a Marine Sanctuary. 16 U.S.C. § 1441(g).

particularly strict and have severely limited harvest opportunities coast-wide. The fishing that is now allowed has been fully authorized by current fishery management regulations. Over time, it is expected that stocks will increase and, with that increase, fishing will also increase. Thus, it is reasonable to expect that fishing conflicts will increase over the life of the MARS Project, e.g. 26 years. 5-10

Inevitable Conflicts

Conflicts between submarine cables and the fishing industry are well documented. In fact, Tracey Lynne Holman, a Master of Marine Studies student at the University of Washington, wrote a thesis on the subject in 2000. The paper has been published on the World Wide Web with a cover that stated: Contribution to the NEPTUNE PROJECT; www.neptune.washington.edu. Ms. Holman studied the conflicts between the submarine cable and fishing industries in Oregon and suggested an approach for resolving them. The clear implication is that the NEPTUNE Project, of which the MARS Project is a prototype apparently, can learn from these experiences in implementing its planned submarine cable program and use them in addressing similar conflicts in the MARS and NEPTUNE projects. However, this paper was not even referenced in the DEIS and, to date, MBARI has not addressed the fishing conflict issue in an appropriate and successful manner. 5-11

The DEIS at various points (e.g., Section 4.2) confirms that these conflicts in fact exist, but the analysis of the magnitude and scope of this conflict is shallow and rudimentary, and ignores easily available sources of contrary information.¹⁰ Moreover, nothing concrete is suggested in mitigation to avoid or deal with these conflicts. It is also clear from the discussion in the DEIS that the authors did not directly contact those fishermen who would be directly affected by the impacts. Indeed, as if working from a distance using only general tables and charts developed by regulatory agencies, the DEIS tries to paint a picture of de minimus impact. The text at page 4.2-15 suggests that a snag from bottom fishing gear might occur once in 26 years, giving the impression that any such snag in this setting is extremely unlikely. But the Holman thesis quotes an AT&T source that “[a]t least twice a month, somewhere in the world a fisherman snags a cable with fishing gear.” Holman Thesis at 6. 5-12

But the most glaring omission in the DEIS is the failure to mention MBARI’s own research on marine cables and fishing impacts: Irene Kogan, et al., Environmental Impact of a Submarine Cable: Case Study of the ATOC/Pioneer Seamount Cable, Monterey Bay Aquarium Research Institute and Monterey Bay National Marine Sanctuary, November 2003. A summary write up of this research project can be found at www.mbari.org/education/earth/2004/ATOC. This research report was to examine the environmental impacts of the ATOC/Pioneer Seamount cable located in the Sanctuary off Half Moon Bay, California. This cable was installed in 1995, about 10 years ago, for performing acoustic tomography. Contrary to the rosy observations in the DEIS, the following statement is found in the research write up: 5-13

Fishing activity is the main cause of submarine cable breaks worldwide as

¹⁰ This part of the DEIS reads as an advocacy piece, written to put the Applicant’s proposal in an overly positive light.

unburied cable is vulnerable to being snagged by fishing vessels. Several kinks in the ATOC cable were found in an area subjected to intense trawling activity. The first break in this cable's history was attributed to trawling, and seafloor tracks similar to trawl marks were observed in that area during the survey. The cable was broken a second time and has not transmitted data since September 2002. The exact location of the break and its cause were not found during the survey.

This research report is not listed in the References section of the DEIS. A copy of the write up is attached (Exhibit 1). Instead, the DEIS makes summary reference to an assessment prepared for an entity called Global West Network, using a so-called cable fault model. That model is then said to be the basis for concluding that the risk of a fishing snag is "exceedingly low" in this case. DEIS at 4.2-12. However, MBARI's own research indicates that at least two snags, and possibly one break, caused by trawling has affected the ATOC cable in only 7 years. No analysis of the adequacy of the Global West Network model, particularly in light of the ATOC factual information, is provided. The reader is only given a summary conclusion. Such simplistic analysis is not likely to survive a court challenge, under either State or Federal law, and should never have been accepted as part of this DEIS. For certain, State and Federal agencies should not rely on it for their decision-making.

5-13,
cont.

The issue of the snagging of the exposed cable by fishing gear has significant environmental impacts. Snagged gear may also pose entanglement problems for marine mammals that frequent the area. The need to regularly engage in intrusive industrial activity to repair the cable every few years (every two years if the ATOC experience in very similar circumstances within the Sanctuary has meaning) will cause new environmental disruption each time. Yet the DEIS contains no specific information about how many vessels use the area where the cable will be located, what types of vessels are active or what gear they use, the projected fishing activity over the life of the cable, and other obviously relevant data and information.

5-14

Given the general experience of trawling impacts on submarine cables, as reflected in a multitude of reference materials for all kinds of cables (commercial, military, research), and the particular experience with the ATOC cable, it would be arbitrary and capricious for any State or Federal agency to rely upon MBARI's assessment of the risk of such adverse events as set forth in the DEIS. In fact, the risk of a trawl vessel snagging on the MARS cable, given its preferred route, is significant.¹¹ If the ATOC cable experienced one break, and several kinks, in less than 7 years due to trawling, then it is quite likely that the proposed MARS cable, which was routed through known fishing grounds rather than away from them, will be snagged and perhaps broken every year or so. As a consequence, further environmental disturbance will be required to repair the cable and liability disputes will surely result.

5-15

The DEIS also fails to apply the precautionary principle to the various ecological uncertainties obvious here. This principle should be well known to MBARI but gets no treatment at all in the DEIS. Therefore, the failure to analyze the risk associated with fishing gear conflicts undercuts all the conclusions in the DEIS as to the degree of risk and the

¹¹ ACSF prefers Alternative 3, which was rejected prior to issuance of the DEIS, as the best route for the cable, if one were built.

significance of the related environmental impact. That a research institution of MBARI's purported prominence would fail to prepare an adequate assessment of a project for which MBARI is responsible for obtaining permits is quite troubling.

5-15,
cont.

MBARI Has a Conflict of Interest

ACSF believes that MBARI has a conflict of interest with respect to analysis of the impacts of fishing in this case and in seeking to enter into what is referred to as a Fisherman's Agreement, as it is called in the DEIS (page ES-7). Although the views of ACSF have been known for some time, MBARI never made a proposal in writing that could be considered by fishing industry representatives until just last week. The essential issues in any such agreement can be easily identified and the need for such an agreement has been well recognized by the organizers of NEPTUNE, as evidenced by the Holman Paper. But, as of this date, nothing has been agreed to. Moreover, the DEIS does not include information gathered from the fishermen themselves. Overall, communications between MBARI, which has the affirmative duty of working with the fishermen in leading the effort for state and federal permits, and ACSF have not been very successful.

5-16

The source of the problems is clear. MBARI is affiliated with the Monterey Aquarium. The director of MBARI is Dr. Marcia McNutt, who also sits on the Board of Directors of the Aquarium. In fact, several individuals are members of both entities' boards of directors. Thus, the policies pursued by each are essentially the same. Each is funded by the David and Lucille Packard Foundation, a private trust with its own self-directed policies and goals. None of these institutions are considered to be public, although it appears that federal funds are provided to conduct some of the programs of MBARI. Because it is a private institution, MBARI does not function with the same concerns and policy directives that apply to, say, the Monterey Bay National Marine Sanctuary or a scientific laboratory at the University of California.

The conflict arises because the Monterey Aquarium has been leading a major campaign for a consumer boycott of the very fishing activity that would be the subject of a Fisherman's Agreement for the MARS Project. The Aquarium has a Seafood Watch Program which is carried out, in part, by a consumer brochure distributed by the Aquarium and available on its website that tells the consumer what seafood should be purchased and what seafood to be avoided. This Seafood Guide currently recommends against any purchase of Pacific (trawl-caught) rockfish. The label for this type of fish is red and means "Avoid." Yet all trawl fishing for rockfish on the West Coast must be conducted in accordance with strict State and Federal fishery management regulations. These regulations include no-fishing zones, gear restrictions, quotas, and seasonal closures.

Fishermen do not make the regulations; duly authorized government authorities do. Fishermen can only comply, under threat of monetary and criminal penalties, and gear and vessel forfeiture. Any Pacific rockfish that would be caught, therefore, would be considered legal and any fisherman would be authorized to sell the fish. The Aquarium's Seafood Watch Guide campaign, nonetheless, calls upon the public to boycott legally caught Pacific rockfish, the result of which is to undercut any law-abiding fisherman who seeks only to make a living for his or her family.

The leadership of MBARI has, presumably, adopted and supports the boycott policy and is aggressively pursuing it. Notwithstanding the fact that government agencies are also aggressively regulating the Pacific rockfish fishery, the Aquarium's boycott policies remain in place. In effect, the Aquarium is encouraging the public to have no faith in government fishery management policies and programs and to punish law-abiding fishermen. The Aquarium is seeking to undercut the business of lawfully trawling for Pacific rockfish, which will result in harm to individuals and businesses that rely on fishing for a living. It seems the Aquarium is run by individuals who long ago forget what it takes to put food on the table for a family.

Therefore, it is not terribly surprising that there is no Fisherman's Agreement and that the DEIS is inadequate. But it is surprising that the other academic institutions in the NEPTUNE Project, and the National Science Foundation, have allowed MBARI to take the lead on a well-known and important problem of conflict between the establishment of a new submarine cable network and traditional fishing activity. Perhaps only through the intervention of these other agencies and institutions will something fair be developed for dealing with this conflict. Whatever is negotiated here will set the precedent for locating the NEPTUNE cables in other areas.

What ACSF Believes Is Necessary

ACSF is prepared to support the MARS Project if their concerns are addressed in a fair and balanced manner, through a legally enforceable written agreement or pursuant to lease and permit conditions required by State and/or Federal agencies. In order to resolve the conflict that is created by authorizing the otherwise illegal activity of placing a submarine cable in the Monterey Bay Sanctuary, the following issues should be addressed:

1. The conflict of interest posed by MBARI's involvement and the anti-fishing policies of the Aquarium needs to be resolved. MBARI cannot use the MARS Project to force fishing out of Monterey Bay.
2. It should be confirmed that no area where the cable is located is to be off-limits to fishing, but that fishing should be conducted pursuant to lawfully issued State and Federal fishery management regulations. 5-17
3. A far more thorough and intellectually honest assessment of the risk of snagging the cable must be prepared. This should include more detail about the fishing activity now active there, the types of vessels and gear used (and the relative risk of snagging of each), and a projection of fishing activity over the life of the project, applying the precautionary principle. At present, the discussion and analysis in the DEIS is incomplete, conclusory and biased. 5-18
4. A system of regular dialogue should be established to substitute for the unsatisfactory communications between the Applicant and the fishing industry. Other entities responsible for the MARS Project may want to intervene to assure that MBARI is not using the Project to further the Monterey Aquarium's anti-fishing boycotts.

5. Mechanisms should be put in place to provide up-to-date information about the location of the cable and steps to be taken if fishing gear appears to be snagged. More definitive measures should be implemented during the cable-laying operation to prevent conflict.

5-19

6. Fishermen should be compensated for gear lost and lost fishing times, at reasonable amounts, without inordinate delay. Fishermen, or their organizations, should be provided financial assistance and incentive to work continuously on assuring the least risk of harm to the cable.

5-20

7. If fishermen follow appropriate procedures, they should not be liable for damage to the MARS project cable and equipment. In addition, the legal status of the ownership of the cable must be clarified. There should also be a fair mechanism to resolve claims so that any claims can be resolved expeditiously.

5-21

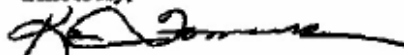
8. Improved discussion of the impact of the cable-laying activities on endangered and threatened species in the Bay is needed, including, but not limited to, whales and salmon. The DEIS should include the same discussion as would be included in a biological assessment or biological opinion under Section 7 of the Endangered Species Act, 16 U.S.C. § 1536. The current discussion is inadequate.

5-22

If these items cannot be negotiated between ACSF and MBARI, they should be included in any lease issued by the State or any permit issued by NOAA or other Federal agency, if approval of the project in its current form is contemplated.

We appreciate the opportunity to present our views to you.

Sincerely,



Kathy Fosmark

Monterey, CA 93940

cc: Governor Arnold Schwarzenegger
 Senator Diane Feinstein
 Senator Barbara Boxer
 Congressman Sam Farr
 National Science Foundation
 National Oceanic and Atmospheric Administration
 Congressman Richard Pombo, Chairman, House Resources Committee
 Senator Ted Stevens, Chairman, Senate Commerce Committee
 California Coastal Commission

Environmental Impact of a Submarine Cable: Case Study of the ATOC/ Pioneer Seamount Cable

By

Irina Kogan^{a,b}, Charles K. Paull^a, Linda A. Kuhn^a,

Erica J. Burton^b, Susan Von Thun^a, H. Gary Greene^a, James P. Barry^a

^aMonterey Bay Aquarium Research Institute, ^bMonterey Bay National Marine Sanctuary

In recent years there has been a significant upsurge of activity and interest in installing offshore cables for both commercial (e.g. telecommunications) and scientific purposes. Cables that are only one-to-two inches in diameter are able to transmit power and large amounts of data over long distances. The telecommunications industry is in the process of building an extensive undersea global network to connect large urban centers on different continents. Scientists also want to utilize the power and data transmission capability of underwater cables but for the purpose of studying coastal and marine environments. Whereas the traditional mode of marine data collection consists of sporadic shipboard surveys, cables allow scientists to set up instruments and experiments that collect and transmit data continuously. Constant monitoring promises to improve our understanding of the ocean and could lead to major new discoveries regarding marine systems.

Due to the high degree of interest in installing cables in marine environments, there is also a need to better understand the environmental impacts of cables on the seabed. For this purpose, NOAA- Oceanic and Atmospheric Research, NOAA- National Ocean Service, and the Monterey Bay Aquarium Research Institute (MBARI) partnered to study the environmental impacts of the ATOC (Acoustic Thermometry of Ocean Climate)/ Pioneer Seamount cable.

The 95 km ATOC/Pioneer Seamount cable lies mostly within the Monterey Bay National Marine Sanctuary off Half Moon Bay, CA. The cable was installed in 1995 by the ATOC research consortia and was initially used to connect an acoustic projector and hydrophone on Pioneer Seamount to shore for performing acoustic tomography in the North Pacific. The cable was laid directly on the seafloor, not buried. In 2001, OAR took over responsibility for the cable and used it to monitor ocean sounds near Pioneer Seamount. The permit issued by the National Marine Sanctuary Program required a survey of the cable before December 2003. In order to scientifically investigate the environmental impacts of the cable and address the National Marine Sanctuary Program permit requirements, MBARI and NOAA scientists collected data from selected sites during three research cruises in 2002 and 2003, using MBARI's vessels and remotely operated vehicles (ROVs). The survey objectives were to analyze the effect of the cable on the benthic organisms and habitat, as well as to document the state of the cable.

The survey team analyzed cable and control sites over 15 kilometers of seafloor. They concluded that the main biological difference was the greater number of organisms attached or adjacent to the cable relative to control sections of the seafloor. In soft sediment areas, the cable stands out as a hard surface. Organisms such as anemones, which are known to colonize hard substrates, were more abundant on the cable in transects at most soft sediment locations. Data extrapolation suggests that more than

EXHIBIT 1

50,000 anemones may live in the modified habitat created by the cable. Other organisms such as echinoderms and sponges were also seen living on the cable. Higher numbers of flatfish and rockfish were also found near the cable at some sites. More shell hash and drift kelp were also found near the cable at several sites, perhaps caused by cable-induced hydrodynamic perturbations that concentrate shell hash and minor amounts of drift kelp near the cable. Analysis of sediment cores taken adjacent to the cable and 100 meters away from it showed that the cable has had no apparent effect on organisms that live within the sediment. The team extrapolated that a total of approximately 500,000 organisms may be concentrated near or on the 95-kilometer cable.

Although the cable was installed on the seafloor unburied, the survey team estimates that approximately 50 percent of the cable has become buried over time. The buried sections lie within continental shelf sediments, in water depths less than 120 meters, whereas much of the cable remains exposed on the seafloor at deeper depths and on rocky terrain. The depth of burial is relatively shallow (less than 10 centimeters) and the cable is likely to become exposed in places due to shifting substrate. A notable discovery was that the cable was damaged in a rocky, nearshore, high-wave-energy area where frayed cable, unraveled cable armor, and vertical grooves in the rock apparently cut by the cable were found. The periodically intense wave energy in that region appears to be strong enough to shift the cable's position, abrading both the cable and the rocks. Neither the rocks nor the cable were damaged in the rocky environment on Pioneer Seamount.

Cable suspensions and loops are of concern due to potential entanglements, such as with fishing gear and marine mammals. No such entanglements were found although suspensions were seen throughout the survey in areas of irregular topography. Most of the suspensions were short (about 10 centimeters above the seafloor). However, longer suspensions (up to 40 meters long and 2 meters high) were seen in rocky regions. Multiple loops of slack cable, added during a cable repair operation, were found lying flat on the seafloor.

Fishing activity is the main cause of submarine cable breaks worldwide as unburied cable is vulnerable to being snagged by fishing trawls. Several sharp kinks in the ATOC cable were found in an area subjected to intense trawling activity. The first break in this cable's history was attributed to trawling, and seafloor tracks similar to trawl marks were observed in that area during this survey. The cable was broken a second time and has not transmitted data since September 2002. The exact location of the break and its cause were not found during this survey.

Results and observations from this survey will aid National Marine Sanctuary Program decision makers regarding the ATOC Pioneer Seamount cable's future and provide scientific data for shaping cable policy.

EXHIBIT 1

**RESPONSE TO COMMENT SET 5: ALLIANCE OF COMMUNITIES FOR
SUSTAINABLE FISHERIES**

Letter dated April 25, 2005

5-1. The plow would cut a trench approximately 3.3 feet (1 meter) wide and 3.3 feet deep, which would be filled in as the plow buries the cable (see Sections 2.2 and 2.2.3 of the Draft EIR/EIS). Section 2.1.1 of the Draft EIR/EIS indicates that 76 percent of the cable would be fully buried, which means that approximately 7.6 miles (12.2 km) would either not be buried or would only be partially buried. Additional information on cable burial is presented in Section 2.2 of the Draft EIR/EIS. As the comment indicates, Figures 4.4-6 and 4.4-7 of the Draft EIR/EIS depict the locations where full, partial, and no burial are anticipated. Please also refer to Table 4.4-1 on page 4.4-17 of the Draft EIR/EIS.

Near the shore, the cable would be placed in a conduit that would be installed using a technique called horizontal directional drilling (HDD). HDD is a steerable boring method, used instead of trenching, for the installation of pipes, conduits, and cables in a shallow arc using a surface-launched drilling rig. It is used for horizontal crossings, such as across rivers and channels, typically from one surface point to another. It is not the same technology or procedure used to directionally drill for offshore oil and gas, although drilling mud or fluid is used to aid the drilling.

5-2. The State CEQA Guidelines [14 CCR §15123(b)(2)] require that the Executive Summary in a Draft EIR include a statement identifying areas of controversy known to the Lead Agency. At the time the Draft EIR/EIS was published, the only area of controversy that had been identified was the Project's potential adverse effect on commercial fishing, specifically economic consequences for individual fishermen if gear were to be damaged or lost if snagged on the MARS cable or science node. The Draft EIR/EIS acknowledges, based on previous analyses of other commercial fiber optic cable projects in California waters, that there is a risk, albeit small, i.e., one snag in 26 years, that trawl doors could snag on the exposed cable, as well as a risk of snagging the science node or attached equipment (see Section 4.2.4 of the Draft EIR/EIS, specifically the discussion of Impact CRF-2). However, pursuant to significance criteria stated in the Draft EIR/EIS, the potential risk is not significant.

As detailed in Section 2.2, otter trawl doors typically penetrate the seafloor between 1-2 inches, but can get as deep as 1.6 ft if the trawl becomes buried or falls on its side. Since trawling has the potential to interact with the cable in both

1 buried and unburied areas, the impact analysis considered fishing over both
2 buried and unburied cable segments as worst case scenarios, although it is less
3 likely that a snag would occur where the cable is buried as compared to
4 unburied. Other methods of fishing such as traps from the crab fishery were also
5 factored into the impact analysis. Evidence for the lack of cable/fishing gear
6 interaction is represented by the lack of cable snagging along routes installed by
7 AT&T off California in 2000. No snagging occurred even in unburied areas off
8 Morro Bay where fishing (trawling) occurs. In contrast, a recent report by Kogan
9 et al. (2003) indicated that the ATOC cable, an unburied acoustic cable off Half
10 Moon Bay, CA, may have been snagged up to two times presumably by trawlers.
11 Since the cable will be buried to a depth of 3.3 feet (1 m) over 76 percent of the
12 route, it is reasonable to conclude that interactions between fishing gear and the
13 cable will be minimal and snags are unlikely, as detailed in Section 4.2.

14 5-3. The Lead Agencies are aware that the Applicant and representatives of local
15 fishermen's organizations have been involved in discussions regarding a
16 reimbursement agreement for lost or damaged fishing gear. Such an agreement
17 was not in place at the time of publication of the Draft EIR/EIS (see Section 4.2.4
18 of the Draft EIR/EIS) and was still not in place at the time this Final EIR/EIS was
19 prepared. Based on the analysis presented in the Draft EIR/EIS, the proposed
20 Project's effect on commercial fishing would be adverse (Class III) but not
21 significant, and therefore, mitigation is not required. However, as stated at the
22 end of the discussion of Impact CRF-2, implementation of a reimbursement
23 process would serve to further reduce adverse impacts on commercial fishing by
24 providing a mechanism to compensate fishermen, e.g., for potential gear losses.
25 The MBNMS will work with State agencies to implement necessary
26 reimbursement provisions for fishing gear that is lost or damaged by the
27 proposed cable.

28 5-4. The Draft EIR/EIS is a public information document that provides an assessment
29 of the potentially significant environmental impacts of any proposed project
30 based on the requirements of the CEQA (see section 15002, State CEQA
31 Guidelines) and the NEPA. It is not intended to provide an analysis of the legal
32 status of the Project or to speculate about potential legal remedies for parties
33 who may seek damages in the future. However, we confirm that the MARS cable
34 would be owned and operated by MBARI, not the federal government. Notice of
35 the installation of the cable would be published in the Coast Guard's weekly
36 *Local Notice to Mariners* (see Section 4.7.2 of the Draft EIR/EIS). The National
37 Oceanic and Atmospheric Administration's (NOAA) Office of Coast Survey

1 typically includes cables on navigational charts. In addition, NOAA's National
2 Ocean Service publishes *Coast Pilots*, which are a series of books that cover a
3 variety of information important to navigators, including the locations of cables
4 and descriptions of cable clearances.

5 5-5. Although the National Marine Sanctuary Program (NMSP) regulations for
6 MBNMS prohibit certain types of activities, they also include a permitting system
7 whereby activities that would otherwise be prohibited may be permitted in some
8 circumstances. A permit for prohibited activities can be issued if the MBNMS
9 Superintendent finds that the activity would have only negligible short-term
10 adverse effects and would: further research related to Sanctuary resources and
11 qualities; further the educational, natural or historical resource value of the
12 Sanctuary; or assist in managing the Sanctuary. MBNMS is currently evaluating
13 the Project as a research project related to Sanctuary resources and qualities.
14 Please also see the response to Comment 5-7 below.

15 5-6. Section 3.2.3 of the Draft EIR/EIS describes an alternate means of partially
16 achieving the research objectives of the proposed Project, which would entail
17 deployment of a series of moored buoys that would transmit wireless data to
18 shore. This alternative was eliminated from detailed evaluation because it would
19 not achieve most of the Project's objectives, would have various operational
20 disadvantages, and would create potential additional impacts on marine
21 mammals, navigation, and fishing (see Section 3.2.3 of the Draft EIR/EIS).
22 Please also refer to Section 3.3.3 of the Draft EIR/EIS, which describes the No
23 Project/Action Alternative, i.e., the status quo. The No Project/Action Alternative
24 would include continued deployment of research vessels and ROVs to collect
25 data, which would not achieve the proposed Project's objectives (please refer to
26 Section 1.1 of the Draft EIR/EIS).

27 5-7. The Applicant proposes to conduct the Project to further research related to
28 MBNMS resources and qualities. The Applicant has applied for a research
29 permit and the National Marine Sanctuaries Program (NMSP) staff has been
30 evaluating the Project as such. The authority to permit activities that would
31 further research related to MBNMS resources and qualities comes from MBNMS
32 regulations (15 CFR 922.133(c)). The NMSP has two distinct authorities to allow
33 for the conduct of specific activities within national marine sanctuaries. The most
34 commonly used authority is found in NMSP regulations (15 CFR Part 922) to
35 allow certain types of activities, e.g., research, education, and resource
36 management, that would otherwise be prohibited by the NMSP regulations. The
37 other authority derives from Section 310 of the National Marine Sanctuaries Act

(16 U.S.C. 1441). The latter authority, named "special use permits" by the statute, is generally used for commercial activities requiring access to or use of sanctuary resources. At this time, this Project has been determined to be a research project and would therefore qualify for a research permit per the NMSP regulations at 15 CFR 922. Should the NMSP determine that the Project is not eligible for a research permit, it will consider other potential permitting mechanisms including special use permits and combinations of other permit mechanisms available to the NMSP.

Please refer to response to Comment 5-1 above for an explanation of the HDD method included for near-shore cable installation.

5-8. Relevant provisions of the Coastal Act are summarized in Section 1.4.6 of the Draft EIR/EIS and Table 1-1 indicates that the Project's consistency with the Coastal Act will need to be determined as part of CDP approval. Determination of Project consistency with the Coastal Act is the responsibility of Monterey County and the California Coastal Commission. Please see additional information in this regard in a revised Section 1.4 and Tables 1-1 and 2.7-1 in Section 4 herein. The Draft EIR/EIS does not treat the impacts of the proposed cable any differently than those of any other type of submarine cable.

5-9. Comment acknowledged. Please refer to Section 4.2 of the Draft EIR/EIS, and, e.g., Responses 1-6, 3-3, and various responses to this comment set.

5-10. The Draft EIR/EIS evaluates the potential for trawling to snag the cable based on records of historic trawling activity over three decades. The model used to determine the likelihood of a cable snag or other type of cable failure employed a cable fault rate coefficient (faults per kilometer of cable per year) that was based on an extensive database of records of reported faults in submarine fiber optic cables. The potential reductions in fish catch estimated in the Draft EIR/EIS are based on a conservative, worst-case scenario, which assumes that reductions in fishing revenues would be realized along the entire length of the cable, including both buried and unburied areas.

The data presented in the Draft EIR/EIS considered historic fishing data over a several year period and used a worst-case approach to describe potential impacts to commercial fishing. The analysis did not consider any reductions in fishing from shelf closures, the potential for which was announced after the DEIR/EIS was circulated for review, and accordingly the document does not speculate on potential changes in stocks from such closures. While it is

uncertain whether such closures will be permanent or ultimately modified during the life of the project (25 years), it is reasonable to assume that fish stocks (on average) could remain similar to levels described in the document and fishing pressures would remain similar to current levels. See also Response 5-18.

5-11. The Holman paper referenced in the comment examines a process followed in Oregon to resolve conflicts between the fishing industry and the submarine cable industry. The basic conclusion of the Holman paper is that negotiation between the two industry groups can be used to establish agreements to resolve disputes over multiple uses of the sea floor. While the Holman paper provides useful information regarding the Oregon case study, it does not provide any information specifically relevant to the impact analysis presented in the Draft EIR/EIS specifically in Section 4.2.4. As such, the Holman paper was not referenced in the Draft EIR/EIS.

5-12. The potential impacts on commercial fishing are sufficiently analyzed in the Draft EIR/EIS to determine if any of the significance criteria listed in Section 4.2.3 of the Draft EIR/EIS would be exceeded by the proposed Project. The Draft EIR/EIS acknowledges that there is a risk that commercial fishing equipment that contacts the bottom, e.g., trawl doors, could snag the cable and cause damage to or loss of fishing gear. As detailed in Section 2.2 and described above in Response 5-2, otter trawl doors typically penetrate the seafloor between 1-2 inches, but can penetrate as deep as 1.6 feet if the trawl becomes buried or falls on its side. Since trawling has the highest potential to interact with the cable in both buried and unburied areas, it was used as the worst-case fishing method to assess cable impacts. Other methods of fishing such as traps from the crab fishery were also factored into the impact analysis. However, this potential impact is determined to be adverse (Class III), but not significant based on the significance criteria developed by the Lead Agencies and presented in the Draft EIR/EIS; therefore, no mitigation measures are required. Although potential impacts associated with a gear snags have been determined to be not significant, the implementation of a process between the Applicant and the fishing community for reimbursement for lost or damaged fishing gear would reduce potential adverse impacts further by providing a mechanism for compensating fishermen for damages. The MBNMS will work with State agencies to implement necessary reimbursement provisions for fishing gear that is lost or damaged by interactions with the proposed cable.

It is acknowledged that fishermen were not directly contacted during the preparation of the impact analysis because recent information from fishermen in

the project area was available in written reports. However, data provided by the fishermen themselves to the California Department of Fish and Game (CDFG) in the form of log book entries (trawl logs) and catch block data were used to determine the level of potential impact on fishing methods that directly contact the bottom (trawls, traps). These types of data are presumed to be accurate and have been routinely used to describe fishing-related impacts of offshore projects throughout the State. The cable snag model described on page 4.2-14 of the Draft EIR/EIS was developed by Global Photon, Inc., for the Global West Network (CSLC 2000), a cable that was installed in 2001 between Morro Bay and San Diego, California. This model uses the most applicable database on cable faults (interaction between the maritime industry and telecommunications cables), with particular emphasis on cables off the west coast and Canada due to the similarities in habitats, cables, and fishing gear. These data, combined with the most current fishing information (catch block data), showed that the potential for snagging the cable is extremely low. In addition, the most recent AT&T data on cable faults off California (AT&T 2003) indicates there have been no faults reported from the fishing industry on these cables since their installation in 2000. Some fishing gear and other materials have been found attached to the cable, but none was determined to be related to trawling. More importantly as related to potential faults, the AT&T results indicating no reported faults should be very applicable to the proposed MARS cable since both include buried and unburied segments that are within commercially trawled areas.

The Holman thesis does cite an AT&T report (1993) which indicates that a fisherman snags a cable somewhere in the world at least twice a month. However, this figure applies to all known submarine cables worldwide, both buried and surface laid, and is not applicable to assessing potential snags to buried cables on the west coast of the United States. As stated above, the most recent AT&T data for their buried west coast cables indicates no faults have been reported on their cables from commercial fishing since their installation off the California coast between Morro Bay and San Diego in 2000. In addition, no faults have been reported by AT&T on any AT&T buried cables since installation (AT&T 1999). Comparison of as-laid burial data from 2001 and the 24-month re-survey conducted in 2003 did not reveal any changes in the burial state of any of the AT&T cables due to fishing conflicts or sediment movement. In addition, AT&T (1999) indicates that since 1967, when AT&T began burying cables, there have not been any instances of a buried cable becoming unburied.

1 The Draft EIR/EIS acknowledges that there is a potential for trawl gear and other
2 bottom-fishing gear, such as traps from the crab fishery, to snag the cable in
3 areas where the cable is not buried. However, this likelihood is expected to be
4 low (e.g. 1 in 26 years), as documented on page 4.2-14 of the Draft EIR/EIS.
5 Recent data from the ATOC cable suggest that interactions between fishing gear
6 and an unburied cable are possible. For example, the ATOC cable may have
7 been snagged by fishing gear once or twice since it was installed in 1995,
8 although, no reports of snags have been documented. As a general indication of
9 the potential for interactions between fishing gear and the ATOC cable,
10 commercial trawl information (trawl track data) indicates that 1,867 trawls were
11 conducted in the cable region between 1997 and 2003, with the highest number
12 occurring in 1997 (471) and the fewest in 2001 (139) (CDFG unpublished data).
13 In comparison to the ATOC data, a total of 2,475 trawls occurred over the
14 proposed MARS cable route during the same time period (CDFG unpublished
15 data). However, when considering only the unburied segments of the MARS
16 cable (~12 km), a total of 726 trawls were conducted in this area, with the
17 greatest number occurring in 1998 (218) and the fewest in 2003 (52). If these
18 data are standardized to the number of trawls per km of cable (trawling intensity),
19 more trawls were conducted over the MARS unburied section of cable (range:
20 4.3-18.2 trawls/km) than the ATOC cable (range: 1.5-5.0 trawls/km). Thus
21 statistically, there appears to be a greater potential for fishing gear and cable
22 interactions along the unburied MARS route, compared to the entire ATOC route.

23 Of the two analyses described above, greater reliance on the documentation
24 presented on page 4.2-14 of the Draft EIR/EIS is warranted because it is based
25 on over four years of actual operating experience of a cable system that is
26 comparable to the proposed Project, e.g., installation methodologies, situated in
27 an area historically fished by trawlers, and comprising both buried and unburied
28 portions. Therefore, potential impacts from potential snagging of the MARS
29 cable by fishing gear remains adverse (Class III), but not significant because the
30 potential impact remains below the Significance Criteria within Section 4.2 of the
31 Draft EIR/EIS. See also response 5-3 in this regard.

32 5-13. As indicated in the response to Comment 5-12 above, the cable snag model
33 identifies the potential for cable snags and the number of reported faults on west
34 coast cables that have occurred since 2000. This information is based on AT&T
35 data for buried fiber optic cables. In addition, it should be noted that the MARS
36 cable would be buried for approximately 76 percent of the proposed route while
37 the ATOC/Pioneer Seamount Cable mentioned in the summary report described

1 by Kogan et al. (2003) was installed unburied along its full length, even though
2 some sediment movement has buried much of the cable in shallow shelf areas to
3 depth of 27 cm, while most of the deeper offshore areas remain unburied. In
4 addition, as noted in the response to Comment 5-10, the Draft EIR/EIS
5 acknowledges that there is a risk that commercial fishing equipment that contacts
6 the bottom, i.e., trawl doors, could snag unburied sections of the cable and cause
7 damage to or loss of fishing gear.

8 The Kogan et. al. study of the ATOC cable indicates that there may have been a
9 few (up to two) times that the cable was “snagged,” presumably by whatever
10 mechanism made tracks in the seafloor near the cable, concluding the cable
11 could have been snagged by a trawler. Since the entire length of ATOC cable
12 (59 miles) (95 km) was surfaced laid (unburied), it is reasonable to expect that
13 this cable is more likely to be snagged than cable that is buried. The MARS
14 cable would be buried over 76 percent of the route, with only a small portion 7.4
15 miles (12 km) that would not achieve maximum burial. The unburied area of the
16 MARS cable is in hard bottom habitat where trawling does occur, so it is
17 possible, as the Draft EIR/EIS acknowledges, that the MARS cable (and science
18 node) could be snagged. However, it is unlikely that the cable will be snagged at
19 a greater frequency than described in section 4.2 (a few times over the life of the
20 cable), since the length of unburied cable is significantly less than that of ATOC.
21 As noted in the detailed above in Response 5-12, there is a higher trawl intensity
22 (number of trawls/km) in the unburied portion of MARS as compared to ATOC.
23 This is due to overall higher fishing pressure (more total trawls) in Monterey Bay
24 (2,475) along the proposed MARS route between 1997 and 2003 compared to
25 the Half Moon Bay region (1,867), where the ATOC cable is located.
26 Nonetheless, potential impacts from the snagging of fishing gear would remain
27 less than significant. Additional information regarding potential cable snags on
28 the MARS cable is identified in response to comment 5-12 above.

- 29 5-14. Section 4.2-4 of the Draft EIR/EIS describes the potential impacts that may occur
30 on commercial fishing due to the proposed Project. Sections 4.2 and 4.7 of the
31 Draft EIS/EIR contain information identifying marine vessel use and commercial
32 and recreational fisheries data for the proposed project route. Specific fishing
33 data and historic trawl track information is identified in Table 4.2-2 of the Draft
34 EIR/EIS. In addition, Section 2.2 of the Draft EIR/EIS describes the techniques
35 that will be used to bury the cable to a maximum depth of approximately 3.3 feet
36 (1 meter). As the cable would be buried over a large portion of the proposed
37 route (approximately 76 percent), the impacts identified on commercial fishing

described in Section 4.2 of the Draft EIR/EIS are appropriate. Furthermore, the likelihood of repeated repairs to the cable and the potential impacts associated with this activity is considered extremely low because of the extent of burial, unlike the ATOC cable, which is not buried. Please also see section 4.2 of the Draft EIR/EIS and the response to Comment 5-12 above.

5-15. Based on the analysis presented in the Draft EIR/EIS and the established impact significance criteria, the proposed Project's effect on commercial fishing from cable snagging would be adverse, not significant. As indicated in the responses to Comments 5-12, 5-13, and 5-14, the MARS cable would be buried to a maximum depth of approximately 3.3 feet (1 meter) for over 76 percent of the proposed route. The ATOC cable, as well as numerous world-wide cables cited by ACSF, were installed on the seafloor and not buried; ATOC consists of 59 miles (95 km) of unburied cable. As the most current information regarding cable snags provided by AT&T on buried cables off California indicates that no faults have occurred since their installation in 2000, the likelihood of repeated snags on the buried section of the MARS cable is considered improbable. In addition, as described on page 4.2-7 of the Draft EIR/EIS, part of the shelf and proposed cable route has been closed to commercial trawling as a Rockfish Closure Area (RCA) since 2002. Since these areas are essentially closed to fishing, impacts from cable activities would not occur in these areas (see Figure 4.2-3). It is presently unknown whether closed areas will reopen or whether additional closures will occur. However, the impact analysis used for this evaluation did not take into account closure areas or whether cables were buried or unburied (worst-case).

Considering the conservative (worst case scenario) approach of the risk analysis that presumes the potential for impacts associated with potential fishing conflicts, the CSLC and MBNMS believe the Draft EIR/EIS advances the analysis of the issue beyond the concept of a "precautionary principle" with respect to "Commercial and Recreational Fisheries".

The commenter incorrectly assumes that MBARI prepared the EIR/EIS. In fact, it was prepared by the CSLC and MBNMS with the assistance of objective, third party environmental consultants retained after an open, competitive bid process.

5-16. As indicated in the response to Comment 5-12 above, information on total catch and value, supplied by fishermen to the CDFG (catch block data), was utilized to analyze potential impacts of the proposed Project. In addition, Figure 4.2-2 of the Draft EIR/EIS provides information addressing the frequency of trawling over

the proposed cable route. This data was obtained from trawl log book data, which was supplied by fishermen to CDFG. Subsequent comment noted.

5-17. As indicated in the discussion of Impacts CRF-1 and CRF-2 in Section 4.2.4 of the Draft EIR/EIS, the proposed Project does not include any new exclusion areas for fishing. Therefore, no additional area would be off limits to fishing as a result of the proposed Project.

5-18. Please also see the response to Comment 5-5 above. Information on both commercial and recreational fishing activity in the study area is presented in Section 4.2.1 of the Draft EIR/EIS, including information on fishing methods, target fish species, and the size of the Monterey Bay fishing industry. As summarized in the response to Comment 5-12, the cable snag analysis used in the Draft EIR/EIS was used in a previously State-certified EIR and uses the most recent fisheries and relevant cable fault data. In addition, conflicts between the fishing industry and the MARS cable are not comparable to the ATOC cable or to a large number of other fiber optic cables worldwide primarily due to cable burial techniques versus non-burial. Furthermore, as described in responses to Comments 5-12, 5-13, and 5-14, the most current information on AT&T buried cables off California indicates that no faults have occurred since their installation in 2000, primarily due to cable burial requirements. These cables include areas that are not buried, but located in heavily fished (trawled) areas such as off Morro Bay, California.

Section 4.2.4 of the Draft EIR/EIS provides an assessment of the Project's potential impacts on fisheries based on the significance criteria established by the Lead Agencies. The analysis is intended to be objective and at a level detail appropriate to support the impact conclusions. The impact analysis presented did not take into account areas that are or may be closed to fishing, i.e., the analysis is based on unrestricted fishing along the entirety of the cable route. Please refer also to responses 5-10 and 5-15. Accordingly the Lead Agencies do not concur with the conclusion of the comment.

The Pacific Fishery Management Council and the National Marine Fisheries Service have been engaged in a multi-year process to identify and protect Essential Fish Habitat for groundfish as required by the 1996 amendments to the Magnuson-Stevens Act. At the time of this Draft EIR/EIS, the Council has selected preferred actions pursuant to this requirement which may have bearing on this Project. The "Monterey Canyon" has been proposed as Essential Fish Habitat for groundfish and a prohibition on trawling in this region has been

1 identified as a preferred action. The exact boundaries of the “Monterey Canyon”
2 have yet to be resolved and it is not yet clear how much of the proposed cable
3 route will fall within the closure. A final rule implementing the closure of
4 “Monterey Canyon” would be published in the Federal Register in May of 2006.
5 Like all administrative closures, such an action could be subject to future review
6 should new information become available; however, it will have an indefinite life
7 span when implemented. This closure is not a factor considered in any analysis
8 in this document; however, it is worth noting that the regulatory environment is
9 dynamic.

10 5-19. The location of the installed cable would be public information. NOAA’s Office of
11 Coast Survey typically includes cables on navigational charts and NOAA’s
12 National Ocean Service publishes *Coast Pilots*, which are a series of books that
13 cover a variety of information important to navigators, including the locations of
14 cables and descriptions of cable clearances. Please also see response to
15 Comment 1-13. Existing requirements to avoid conflicts with vessel traffic,
16 including fishing vessels, are described in the Draft EIR/EIS (see Section 4.7.2 of
17 the Draft EIR/EIS) in addition to measures proposed by the Applicant (see
18 Section 2.4 of the Draft EIR/EIS). Mitigation measures are also proposed in the
19 Draft EIR/EIS to avoid marine vessel traffic conflicts and delays (see Section 4.7
20 of the Draft EIR/EIS).

21 5-20. Please see the responses to Comments 1-6 and 5-3.

22 5-21. Please see the responses to Comments 5-4, 5-3, and 5-12.

23 5-22. The Draft EIR/EIS’s discussion of “Sensitive Habitats and Species,” with
24 reference documentation, begins on page 4.5-12 and an Essential Fish Habitat
25 Assessment for the proposed Project is included as Appendix D.1 of the
26 document. The purpose of the analysis is to complement, not duplicate the
27 Section 7 consultation process under the federal Endangered Species Act. The
28 MBNMS, CSLC, and other agencies, see Comment Set 3 (federal EPA) and
29 Comment Set 6 (NOAA National Marine Fisheries), believe the level of
30 information, analyses, and mitigation within the Draft EIR/EIS is “adequate.” The
31 USFWS Biological Opinion has not been issued at this time; however, any lease
32 issued to MBARI by the CSLC will require compliance with the requirements of
33 all other agencies. Any requirements of the USFWS above these specified in the
34 Final EIR/EIS will therefore be enforced by the provisions of the lease.

1 **COMMENT SET 6: NOAA NATIONAL MARINE FISHERIES SERVICE**

From: Monica DeAngelis [Monica.DeAngelis@noaa.gov]
Sent: Monday, April 25, 2005 9:55 AM
To: deirdre.hall@noaa.gov
Cc: brownm@slc.ca.gov; Korie Schaeffer
Subject: Draft EIR/EIS MARS MBARI

Importance: High

Deirdre,

NOAA's National Marine Fisheries Service has reviewed the Draft EIR/EIS for the Monterey Accelerated Research System Cabled Observatory, dated March 2005. Korie Schaeffer (Santa Rosa Office's Habitat Division) and I reviewed the Draft EIR/EIS and we have no comments at this time on the Draft EIR/EIS. We appreciate the incorporation of our past recommendations, particularly the inclusion of the mitigation measures to minimize potential impacts to marine mammals and sea turtles.

6-1

We look forward to working with you during the consultation process.
Please feel free to contact me or Korie (707) 575-6087 with any questions.

Cheers,
Monica

--
Monica L. DeAngelis
Marine Mammal Biologist
NOAA's National Marine Fisheries Service/Southwest Region Protected Resources
Division
501 W. Ocean Blvd., Suite 4200
Long Beach, CA 90802
Work: 562-980-3232
Fax: 562-980-4027
E-mail: Monica.DeAngelis@noaa.gov

2

- 1 **RESPONSE TO COMMENT SET 6: NOAA NATIONAL MARINE FISHERIES**
- 2 **SERVICE**
- 3 E-mail dated April 25, 2005
- 4 6-1. Comment noted.

1 COMMENT SET 7: MOSS LANDING HARBOR DISTRICT

----- Original Message -----

Subject: Comments to DEIR MARS Cabled Observatory

Date: Tue, 26 Apr 2005 15:12:48 -0700

From: Linda G. McIntyre <mcintyre@mosslandingharbor.dst.ca.us>

To: <jenkins@slc.ca.gov>

CC: <deirdre.hall@noaa.gov>

The comments of the Moss Landing Harbor District regarding this project are:

- | | |
|--|-----|
| 1. The District is concerned with possible interference with fishing, the fishing industry and fishing interests, some of which are outlined in the Alliance of Communities for Sustainable Fisheries comment letter of even date. | 7-1 |
| 2. The District cannot support the positioning of any part of the cable in a location that has the potential to interfere in any way whatsoever with the Harbor District's or the Army Corps' dredging projects. | 7-2 |
| 3. Any part of the cable planned for positioning within the Harbor District's jurisdiction will require an application for a permit from the Moss Landing Harbor District. | 7-3 |
| 4. The project proponent will need to negotiate with the Harbor District lease or other appropriate fee structures to compensate for the use of any of the Harbor District's lands or submerged tidelands or otherwise for this project. | 7-4 |
| 5. Neither the construction of the project nor the existence of the final cable, if any, can interfere with navigation. | 7-5 |
| 6. The project proponent will need to coordinate with the Moss Landing Harbor District at every stage of the project, if any. | 7-6 |

Thank you for considering the comments of the Moss Landing Harbor District regarding this project.

Sincerely,

Linda G. McIntyre, Esq.

General Manager/Harbormaster
Moss Landing Harbor District
7881 Sandholdt Road
Moss Landing, CA 95039
831.633.5417
831.633.4537 - Fax
831.970.3346 - Cell
mcintyre@mosslandingharbor.dst.ca.us

2

RESPONSE TO COMMENT SET 7: MOSS LANDING HARBOR DISTRICT

E-mail dated April 26, 2005

7-1. Potential impacts on commercial and recreational fishing are discussed in Section 4.2 of the Draft EIR/EIS. Please also see the responses to the comments from the Alliance of Communities for Sustainable Fisheries (Comment Set 5).

7-2. Comment acknowledged. The Lead Agencies have not been presented with any additional information in the record to indicate that any of the alternatives would interfere with harbor dredging projects. At the end of Section 4 in the Draft EIR/EIS is a discussion of the SF-12 Dredge Disposal Site, which is located near the planned MLML pier. Cable installation for Alternative Landing Area 2 would occur in the general vicinity of SF-12, but would not interfere with the use of the dredge disposal site. The proposed Project will require permits from the Corps of Engineers (see Table 2.7-1 in the Draft EIR/EIS) in addition to the approvals required from the CSLC, MBNMS, and other agencies. These considerations will ensure that the proposed Project will not interfere with required dredging activities.

7-3. As described in Section 1.4.7 of the Draft EIR/EIS, the proposed Project acknowledges the jurisdiction of Moss Landing Harbor District. Table 2.7-1 of the EIR/EIS indicates that a Special Activities Use Permit or similar approval would be required from the Moss Landing Harbor District for the portion of the proposed Project traversing the District's jurisdiction.

7-4. Thank you for the information.

7-5. Section 4.7 of the Draft EIR/EIS discusses the proposed Project's potential to interfere with marine vessel traffic in the vicinity of Moss Landing Harbor. The proposed Project would not result in significant delays since HDD would not interfere with vessel traffic. Cable-laying activities associated with Alternative Landing Areas 1 and 2 have the potential to create significant delays (several hours) to marine vessel traffic at the entrance to Moss Landing Harbor. See Section 4.7.6 of the Draft EIR/EIS for the analyses of such potential impacts and the recommended mitigation measures.

7-6. Comment acknowledged. Section 2.4 of the Draft EIR/EIS indicates that the Applicant has committed to notify the Moss Landing Harbor District to ensure the District is aware of the timing of cable laying operations and to work with the

- 1 District to provide notice of cable laying to vessels that operate out of Moss
- 2 Landing Harbor (Draft EIR/EIS, page 2-28, lines 1-4).

COMMENT SET 8: PUBLIC HEARING TRANSCRIPTS

Two Public Hearings were held on April 7, 2005, at 4:00 p.m. and 6:30 p.m. at the Moss Landing Marine Laboratories, 8272 Moss Landing Road, Moss Landing, California. The public was provided the opportunity to comment on the proposed Project during these hearings. Complete transcripts from the two Public Hearings are provided in the Appendix. Four comments were received from Tom Hart, president of the Moss Landing Fishermen's Association during the second Public Hearing. Excerpts from the second Public Hearing, which include Mr. Hart's comments, are provided below for ease of reference:

Comment 8-1:

"I had a question on the hydrophone and you were talking about whales and being able to pick up their sounds. My -- I was just curious if you can -- if they can identify individual whales and has that ever been used as a way to count to see how many whales there are?"

Comment 8-2:

"...I think the landing -- the alternative 2, I know that the bottom sand moves there a lot and that cable would be exposed from time to time. I don't think that would be a good area."

Comment 8-3:

"...the most important thing that I can see is that the work got done before November 15th and it would save a lot of grief. I don't like fishing around the cable but I wouldn't want to have my gear there because the fact is while the Point Sur was doing a lot of mapping this couple months ago up off of the Pigeon and stuff, they were dragging my crab gear all around the ocean. I had to go find it 2 or 3 miles from where I put it. They were very good about avoiding them in the daytime, but they were in there at nighttime too and they were in the gear all the time."

Comment 8-4:

"Another thing is like when we go fishing, we, you know, put a certain amount of current in our lines to attract fish, and I think it would be a good test to -- after the cable's laid, to monitor its path for a leaking current and stuff because, you know, it could -- it could be something that attracts fish, and doesn't matter if it's insulated or not. If it's there, you know, Murphy's law happens."

RESPONSE TO COMMENT SET 8: MOSS LANDING FISHERMEN'S ASSOCIATION

Public Hearing Transcripts (dated April 7, 2005)

8-1. Yes, whales have distinct sonograms and individual voice signatures have been used to estimate populations of whales.

8-2. Section 3.3.2 of the Draft EIR/EIS indicates that implementation of Alternative Landing Area 2 would require the cable to be located in an area of geologic instability and that there is a corresponding concern over the survivability of the cable as it crosses the canyon head at the Moss Landing Harbor entrance.

8-3. Comment acknowledged. According to the Department of Fish and Game's 2005 Calendar of Commercial Fishing Seasons, the commercial fishing season for Dungeness crab begins on November 15, as indicated by the commenter. As stated in Section 2.3 of the Draft EIR/EIS, the Applicant plans to complete cable installation by November 15, 2005. Therefore, there should be no conflict with commercial crabbing.

8-4. Comment acknowledged. The proposed MARS cable would be able to detect changes in current associated with a breach or leak in the cable. The Applicant has indicated that if a leak were detected the cable would be automatically shut down and the Applicant would conduct repairs, if necessary. Regarding the potential to attract fish with electrical current to an uncompromised cable, ongoing scientific studies indicate that many species particularly sharks, skates, and rays can detect small changes in electromagnetic fields, weak currents, and temperature gradients. Sensitive receptors located near the snout of these species are believed to be utilized in prey capture. It is possible that the weak field associated with the cable in general could attract sharks. Several marine cables have been bitten by sharks over the years, including the AT&T line of the Canary Islands in 1986. However, this is not expected to result in damage to the cable or substantially effect marine resources. Sharks, skates, and rays can perceive electric fields, but that does not mean they would be attracted to the electrical currents flowing through the MARS cable. Electroreception in sharks is similar to vision in other organisms. The shark can utilize weak electric fields in prey identification and capture. However, these species are curious, and they may investigate an electrical stimulus as they would an unusual visual or olfactory stimulus, but they would not confuse it with prey. The type of electric fields sharks, rays, and chimaeras detect are D.C. low frequency fields (0.1 Hz to about 25 Hz). The type of signals used to transmit data are usually high

1 frequency, well beyond the frequency response of their electroreceptors. In
2 addition, the cable is insulated and shielded, so the possibility of detection would
3 be low.

4. REVISED PAGES TO THE DRAFT EIR/EIS

In accordance with section 15132 of the State CEQA Guidelines and the NEPA Regulations (40 CFR section 1503.4), this section presents the insignificant modifications that are made to the Draft EIR/EIS to clarify or amplify its text in response to comments. Such changes are therefore consistent with the provisions of section 15088.5(b) of the State CEQA Guidelines. Deletions to text are shown by strike-through and additions to text are shown by underline.

EXECUTIVE SUMMARY

The first paragraph of the Executive Summary (page ES-1) has been modified to indicate that the NSF is a cooperating agency for the Project:

The California State Lands Commission (CSLC) and the Monterey Bay National Marine Sanctuary (MBNMS) have prepared this draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Monterey Accelerated Research System (MARS) Cabled Observatory (the Project) proposed by the Monterey Bay Aquarium Research Institute (MBARI). The National Science Foundation (NSF), which approves funding for the Project, is a cooperating agency. The purpose of this EIR/EIS is to inform the public, permitting agencies, and other decision-makers about the potential environmental impacts of the proposed Project.

SECTION 1: INTRODUCTION

The first paragraph of Section 1 (page 1-1) has been modified to indicate that the NSF is a cooperating agency for the proposed Project:

This Draft Environmental Impact Report and Environmental Impact Statement (EIR/EIS) has been prepared to analyze and disclose potentially significant environmental effects associated with the installation and operation of the Monterey Bay Aquarium Research Institute (MBARI) proposed Monterey Accelerated Research System (MARS) Cabled Observatory Project (Project). This Draft EIR/EIS provides the primary source of environmental information for the lead, responsible, cooperating, and trustee agencies to consider when exercising any permitting or approval authority related to implementation of the proposed Project. The California Environmental Quality Act (CEQA) lead agency for this Project is the California State Lands Commission (CSLC) and the Monterey Bay National Marine Sanctuary (MBNMS) is the National Environmental Policy Act (NEPA) lead agency. The National Science Foundation (NSF), which approves funding for the Project, is a cooperating agency.

1.2 PURPOSE AND SCOPE OF THE EIR/EIS

The second paragraph of Section 1.2 (page 1-8) has been modified to reflect the fact that the NSF is a cooperating agency for the Project:

The EIR/EIS is also intended to inform decision-makers and the general public of the potential significant environmental impacts of the Project. The EIR/EIS also identifies possible ways to reduce or avoid significant impacts through mitigation measures and describes and analyzes feasible alternatives to the Project. ~~Both The CSLC, and the MBNMS, and NSF~~ will consider the information in this EIR/EIS, along with other information, before making any decision to consider the implementation of the Project.

Section 1.4 has been expanded to include discussion of additional federal regulations, as well as to provide additional information on the California Coastal Act. The title and introduction of Section 1.4 on page 1-11 have been updated to reflect the expanded scope of this section.

1.4 CONSISTENCY WITH FEDERAL, STATE, REGIONAL, AND LOCAL PLANS AND REGULATIONS

This section discusses the consistency of the Project with relevant plans and policies of various federal, local and regional government agencies. Plans and policies that are applicable to the Project are presented below, and Table 1-1 provides an analysis of the Project's consistency with these plans and policies.

1.4.3 North County Local Coastal Program (LCP) Land Use Plan (Monterey County Board of Supervisors, June 1982, Updated March 1997)

The North County LCP was created in response to the Coastal Act of 1976, which established a framework for resolving conflicts among competing uses for limited coastal lands. The North County Land Use Plan LCP supercedes previous plans within the coastal zone, including the 1973 Moss Landing Area Development Plan. An updated community plan for Moss Landing is included in the LCP.

Pursuant to the North County Land Use Plan LCP (a.k.a. Monterey County LCP), which was certified by the California Coastal Commission (CCC), project activities located in the coastal zone landward of the mean high tide line would require a coastal development permit (CDP) from Monterey County. The CCC retains permitting authority over development occurring seaward of the mean high tide line (State Tidelands), as discussed in Section 1.4.6.

1.4.6 Coastal Act

Section 1.4.6 has been expanded to provide additional information on the California Coastal Act. The following paragraph follows the last paragraph of Section 1.4.6 on page 1-13.

Section 30600 of the Act requires any person wishing to perform development in the coastal zone to obtain a coastal development permit (CDP). The Coastal Commission retains CDP jurisdiction over tidelands, submerged lands, public trust lands, and lands within 100 feet of any wetland, estuary, or stream (PRC §30601[2]). Other areas of the project site located within the coastal zone are subject to the CDP authority of Monterey County, pursuant to the County's certified Local Coastal Program (LCP) (see Section 1.4.3). Therefore, the Project requires a CDP from the Coastal Commission for Project activities located seaward of the mean high tide line and within 100 feet of a wetland, as well as a CDP from Monterey County for Project activities located in the coastal zone landward of the mean high tide line.

The following sections have been added following Section 1.4.8 on page 1-15, before Table 1-1, to provide descriptions of additional applicable federal regulations.

1.4.9 Clean Water Act of 1977 (Title 33, U.S. Code, Section 1251 et seq.)

The Federal Water Pollution Control Act and subsequent amendments, collectively known as the Clean Water Act (CWA), provides for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 404(b) of the Act prohibits the discharge of dredged or fill materials into the waters of the United States, including wetlands, except as permitted under separate regulations by the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency. Section 401 of the Clean Water Act requires federal agencies to obtain state water quality certification from the local Regional Water Quality Control Board (RWQCB) for any federal project, or federally permitted project, potentially affecting water quality. In this case, the state water quality certification would be obtained from the Central Coast RWQCB. Section 402 establishes conditions and permitting for point-source discharges of pollutants under the National Pollution Discharge Elimination System (NPDES). Pursuant to NPDES requirements, a General Construction Activity Permit is required for construction and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared in order to obtain the NPDES permit.

1 **1.4.10 River and Harbors Act of 1899 (Title 33, U.S. Code, Section 403)**

2 The Rivers and Harbors Act (RHA) addresses projects and activities in navigable waters
3 and harbor and river improvements. Section 10 of this Act prohibits the unauthorized
4 obstruction or alteration of any navigable water of the United States. Permits are
5 required from the Corps for construction of any structure in or over any navigable water
6 of the United States, or the accomplishment of any other work affecting the course,
7 location, condition, or physical capacity of such waters. Because the Project is in an
8 area bisected by a navigation opening under the jurisdiction of the U.S. Coast Guard,
9 Section 10 of the RHA would apply to the Project.

10 **1.4.11 Coastal Zone Management Act of 1972 (Title 16, U.S. Code, Sections 1451-**
11 **1464)**

12 As a federal agency, the MBNMS is responsible for ensuring project compliance with
13 the Coastal Zone Management Act (CZMA). Section 307 of the Act (Title 16, U.S.
14 Code Section 1456(c)) states that federal actions must be consistent with approved
15 State coastal management programs to the maximum extent practicable. California's
16 coastal management program was implemented by the California Coastal Act of 1976
17 (see above). This Act is the State's approved coastal management program applicable
18 to the proposed Project. To document the degree of consistency with the State
19 program, CZMA requires the preparation of a Consistency Determination (CD)
20 whenever a project may directly affect the coastal zone. Because the proposed Project
21 requires a permit from the Corps, a consistency determination must be obtained from
22 the California Coastal Commission pursuant to Section 1456(c)(3)(A) of the CZMA.

23 **1.4.12 Endangered Species Act of 1973 (Title 16, U.S. Code, Section 1531 et seq.**
24 **and Title 50, Code of Federal Regulations, Part 17.1 et seq.)**

25 The Endangered Species Act (ESA) protects threatened and endangered plants and
26 animals, and their critical habitat. The administering agency is the U.S. Fish and
27 Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Under
28 Section 7, the MBNMS, as a federal agency, is required to consult with the USFWS and
29 the NMFS on actions involving listed species. The USFWS and/or the NMFS conduct
30 an internal consultation regarding the effects of any proposed action. A Section 7
31 consultation is initiated when a federal agency presents a biological assessment that
32 examines the potential effects of a specified action on a species. It is concluded when
33 the USFWS and/or NMFS issues a written statement that pronounces whether the
34 action would jeopardize a listed or proposed species, or adversely affect critical habitat.
35 If the species is not in jeopardy, the written statement will include authorization for

1 incidental take. If a species is in jeopardy, mitigation and minimization actions will be
2 included in the written statement.

3 **1.4.13 Marine Mammal Protection Act of 1972 (Title 16, U.S. Code, Section 1361 et**
4 **seq.)**

5 Under the Marine Mammal Protection Act, the Secretary of Commerce is responsible for
6 the protection of all cetaceans and pinnipeds and has delegated this authority to the
7 NMFS. The Secretary of Interior is responsible for sea otters and has delegated this
8 authority to the USFWS. The Marine Mammal Protection Act established a moratorium
9 on the taking of marine mammals in waters under U.S. jurisdiction. The moratorium
10 may be waived when the affected species or population stock is within its optimum
11 sustainable population range and would not be disadvantaged by the authorized taking.
12 The Act directs the Secretary, upon request, to authorize the unintentional taking of
13 small numbers of marine mammals incidental to activities other than commercial fishing
14 when, after notice and opportunity for public comment, the Secretary finds that the total
15 of such taking during a five-year (or shorter) period would have a negligible impact on
16 the affected species. In 1994, a new subparagraph (D) was added to Section 101(a)(5)
17 to simplify the process of obtaining “small take” exemptions when unintentional taking is
18 by incidental harassment only. Specifically, the incidental take of small numbers of
19 marine mammals by harassment can now be authorized for periods of up to one year
20 without rulemaking, as required by Section 101(a)(5)(A), which remains in effect for
21 other authorized types of incidental taking.

22 **1.4.14 Magnuson-Stevens Fishery Conservation and Management Act of 1976**
23 **(Public Law 94-265)**

24 Recognizing the importance of fish habitat to the productivity and sustainability of U.S.
25 marine fisheries, in 1996 Congress added new habitat conservation provisions to the
26 Magnuson-Stevens Fishery Conservation and Management Act, which governs U.S.
27 marine fisheries management. The amended Act mandates the identification of
28 Essential Fish Habitat (EFH) for managed species as well as measures to conserve and
29 enhance the habitat necessary to fish to carry out their life cycles. The Magnuson-
30 Stevens Act requires cooperation among NMFS, the Fishery Management Councils,
31 fishing participants, federal and state agencies, and others in achieving EFH protection,
32 conservation, and enhancement. In Section 303(a)(7) of the amended Magnuson-
33 Stevens Act, Congress directs the NMFS and the eight regional Fishery Management
34 Councils, under the authority of the Secretary of Commerce, to: describe EFH and
35 identify EFH in each fishery management plan; minimize to the extent practicable the
36 adverse effects of fishing on EFH; and identify other actions to encourage the
37 conservation and enhancement of EFH. In Section 305 (b)(2) of the amended Act,

1 Congress directs each federal agency to consult with the Secretary with respect to any
2 action authorized, funded, or undertaken, or proposed to be authorized, funded, or
3 undertaken, by such agency that may adversely affect any essential fish habitat
4 identified under the Magnuson-Stevens Act.

5 The Pacific Fishery Management Council and the National Marine Fisheries Service
6 have been engaged in a multi-year process to identify and protect Essential Fish Habitat
7 for groundfish as required by the 1996 amendments to the Magnuson-Stevens Act. At
8 the time of this Draft EIR/EIS, the Council has selected preferred actions pursuant to
9 this requirement which may have bearing on this Project. The “Monterey Canyon” has
10 been proposed as Essential Fish Habitat for groundfish and a prohibition on trawling in
11 this region has been identified as a preferred action. The exact boundaries of the
12 “Monterey Canyon” have yet to be resolved and it is not yet clear how much of the
13 proposed cable route will fall within the closure. A final rule implementing the closure of
14 “Monterey Canyon” would be published in the Federal Register in May of 2006. Like all
15 administrative closures, such an action could be subject to future review should new
16 information become available; however, it will have an indefinite life span when
17 implemented. This closure is not a factor considered in any analysis in this document;
18 however, it is worth noting that the regulatory environment is dynamic.

19 **1.4.15 National Historic Preservation Act of 1966 (Title 16, U.S. Code Section 470**
20 **et seq.)**

21 Section 106 (16 USC 470f) of the National Historic Preservation Act (NHPA), as
22 amended, requires federal agencies to take into account the effects of their
23 undertakings on historic properties that are listed in or potentially listed in the National
24 Register of Historic Places, and afford the State Historic Preservation Office a
25 reasonable opportunity to comment. The historic preservation review process
26 mandated by Section 106 is outlined in regulations issued by the Advisory Council on
27 Historic Preservation. The analysis contained in Section 4.3 of this Draft EIR/EIS is
28 intended to provide documentation for the Section 106 consultation process.

29 *Table 1-1 on page 1-15 has been updated to provide clarification on the California*
30 *Coastal Act and include the federal regulations added to Section 1.4.*

1 **Table 1-1. Consistency with Applicable Plans and Policies**

Responsible Agency	Plan or Policy	Project Consistent?	Method of Consistency
County of Monterey	Monterey County General Plan (1982)	Yes	The Natural Resources Chapter of the General Plan contains Vegetation and Wildlife Habitat Policies applicable to the Project. To be consistent with the Vegetation and Wildlife Habitat Policies 9.2.1 and 9.2.2 of the Plan, the Project would need to monitor activities that would potentially create siltation and pollution in marine waters, as well as consult with appropriate agencies and obtain applicable permits. This includes consultation with CDFG, as required by Ocean Resources Policy 10.1.1. As designed and through acquisition of required permits, the Project would be consistent with these policies.
County of Monterey	North County Area Plan (1985)	Yes	The Plan lists policies that are supplemental to the Monterey County General Plan and are specific to the characteristics of the North County Area. The Project would not harm environmentally sensitive areas as defined by the Plan and, therefore, would be consistent with the Plan.
County of Monterey	North County LCP Land Use Plan (1982)	Yes	The Plan is intended to protect the overall quality of the Coastal Zone environment and to maximize public access to the coastal areas. Consistency with this would be achieved through consultation with appropriate local agencies and by obtaining applicable local permits. <u>a CDP from Monterey County for Project activities located in the coastal zone landward of the mean high tide line.</u>
County of Monterey	Monterey County Coastal Implementation Plan (1987)	Yes	The Plan establishes regulations for development along the coastal zone that fully implement the policies of the North County LCP Land Use Plan. Consistency with this would be achieved through consultation with appropriate local agencies and by obtaining applicable local permits.

Responsible Agency	Plan or Policy	Project Consistent?	Method of Consistency
Monterey Bay Unified Air Pollution Control District	Draft 2004 Air Quality Management Plan	Yes	Short-term construction emissions would be consistent with regional, State, and federal air quality requirements and accommodated within the plan for attaining ambient air quality standards. No notable emissions would occur during long term operation.
California Coastal Commission (CCC)	California Coastal Act (1976)	Yes, with CDP approval	Project consistency with the Coastal Act <u>requires a CDP from the CCC for Project activities located seaward of the mean high tide line and within 100 feet of a wetland.</u> and the North County LCP will need to be established in order for the County to issue a CDP. At this time, no inconsistencies have been identified.
Moss Landing Harbor District	Moss Landing Harbor District Submerged Land Grant	Yes, with Harbor District permit approval	After review of the Harbor District's land grant and discussions with District staff, no conflicts with the land grant have been identified.
MBNMS	National Marine Sanctuary Program (Title 15, Part 922 CFR)	Yes, with MBNMS permit approval	NMSP regulations prohibit certain activities that would harm or put at risk the Sanctuary or its resources. Various otherwise prohibited activities in the MBNMS may be permitted by the NMSP. The Applicant has applied for a permit under Sections 922.133 and 922.48 of the Program regulations.
<u>Central Coast RWQCB</u>	<u>Clean Water Act (1977)</u>	<u>Yes, with Central Coast RWQCB approval</u>	<u>The Clean Water Act requires water quality certification from the Central Coast RWQCB, a General Construction Activity Storm Water Permit, and a SWPPP. The Applicant has applied for these permits.</u>
<u>U.S. Army Corps of Engineers</u>	<u>River and Harbors Act (1899)</u>	<u>Yes, with Corps permit approval</u>	<u>The Project would require Section 10 permit from the Corps. The Applicant has applied for this permit.</u>
<u>CCC</u>	<u>Coastal Zone Management Act</u>	<u>Yes, with receipt of CD from CCC</u>	<u>The Act requires the preparation of a CD whenever a project may directly affect the coastal zone. Because the Project requires a permit from the Corps, a CD must be obtained from the CCC pursuant to Section 1456(c)(3)(A) of the Act.</u>

Responsible Agency	Plan or Policy	Project Consistent?	Method of Consistency
<u>USFWS and NOAA/NMFS</u>	<u>Endangered Species Act (1973)</u>	<u>Yes, through Section 7 consultation</u>	<u>Consultation pursuant to Section 7 of the Endangered Species Act is required. The USFWS and/or the NMFS will issue a written statement that pronounces whether or not the action would jeopardize a listed or proposed species, or adversely affect critical habitat. No significant adverse impacts on listed species have been identified in this EIS/EIR.</u>
<u>USFWS and NOAA/NMFS</u>	<u>Marine Mammal Protection Act (1972)</u>	<u>Yes</u>	<u>In accordance with the Act, the Draft EIR/EIS includes discussion of potential impacts on marine mammals and measures have been incorporated to avoid taking of a marine mammal. Comments on the Project have been requested from USFWS and NMFS.</u>
<u>NOAA/NMFS</u>	<u>Magnuson-Stevens Fishery Conservation and Management Act (1976)</u>	<u>Yes</u>	<u>An Essential Fish Habitat assessment is presented in Appendix D.1 of the Draft EIR/EIS.</u>
<u>State Historic Preservation Officer</u>	<u>National Historic Preservation Act of 1966</u>	<u>Yes, with SHPO consultation</u>	<u>The MBNMS has provided the State Historic Preservation Officer (SHPO) an opportunity to comment on the Project. Compliance with the Act will be achieved through consultation with SHPO prior to permit approval.</u>

1

2 **SECTION 2: PROJECT DESCRIPTION**3 *The following changes have been made to Section 2 (Project Description).*4 *Page 2-6, Line 30-32:*

5 Based on the location of the cable along the proposed route, ~~three~~ two different
6 armoring types would be used. These would consist of single armor (SA) and single
7 armor light (SAL). ~~and lightweight protected (LWP).~~

8 *Page 2-9, Line 34:*

9 The ~~node~~ trawl resistant frame measures 14.8 feet (4.5 m) long, 11.7 feet (3.6 m) wide,
10 and 4.2 feet (1.3 m) high.

1 *Page 2-10, Lines 1-4:*

2 The node would have eight separate science ports (~~docking stations~~) for oceanographic
3 instruments (Figures 2.1-7 and 2.1-8).

4 *Page 2-10, Line 4-9:*

5 Each port would support bi-directional data transfers of up to 1 Gbit per second from the
6 node to the shore (data from all 8 science ports), but only 100 Mb/sec from each
7 science port to the science instruments placed on an individual science port, and the
8 capability to support a variety of scientific instrumentation arrayed within 2.5 miles (4
9 km) of the node.

10 *Figure 2.1-9 on page 2-13 has been updated to show that the fiber would run through*
11 *conduit on an existing Applicant-owned fence, rather than running along existing power*
12 *poles.*

13 *Section 2.2.2 on Page 2-18, Line 14-15 has been edited for clarification:*

14 Additional armoring of the cable, consisting of single armor light cable sheathing, would
15 be installed in these areas to protect the cable. The Applicant does not propose to use
16 double-armor cable. Double-armor cable is used in high-energy environments with high
17 abrasion risk at depths less than 328 feet (100 m). The depths and pressures that
18 occur on the proposed cable route at the neck leading to Smooth Ridge, where the
19 cable would not be buried, are at or beyond the upper design limit for double-armor
20 cable. In addition, the Applicant is not proposing to armor the cable with rock, protective
21 mattresses, or any other type of surface laid protective structure.

22 *Section 2.2.5 on Page 2-20, Line 26-27 has been edited for clarification:*

- 23 • Burial and inspection of any unburied sections of the cable remaining from the
24 node deployment operation and in the near shore area where the cable joins the
25 HDD-installed pipe.



1

Intentionally left blank

The following Applicant commitments have been added to Section 2.4 on page 2-28:

- Prior to initiating cable laying and HDD operations, a Marine Mammal Monitoring Plan will be prepared describing the protocols for marine mammal observations during cable installation and removal activities. The Plan will be submitted to the CSLC and MBNMS and other applicable agencies listed in Table 1-1, above, for approval prior to initiation of cable installation.
- If fishing gear were entangled with the cable, the Applicant would, within three days, attempt to attach a recovery line to the snagged gear using its remotely operated vehicles (ROVs). If the ROVs are unsuccessful, the location would be marked with a buoy to allow a vessel with a winch to recover as much of the gear as possible for disposal. The timing of actual recovery by vessel would depend on the schedule of the Applicant's two winch-equipped vessels, the Western Flyer and Point Sur. Recovery would be accomplished within one month. If fishing gear were entangled with the cable in such a way that that there was a probability of significant damage to the cable if a recovery were attempted, and all efforts to disentangle the cable failed, the fishing gear would be left in place, but rendered incapable of continuing to harvest marine resources.
- The Applicant will coordinate cable laying activities with the U.S. Coast Guard regarding publication of a notice in the U.S. Coast Guard's Local Notice to Mariners.

The following text in the second bullet in Section 2.4, page 2-26, lines 12-13, has been edited for clarification:

- In areas where cable burial is not possible, additional cable armoring consisting of single armor light cable sheathing will be used and fishers will be notified of locations of exposed cables.

The following paragraph addressing cable repair has been added in Section 2.5.2, page 2-30, between the first and second paragraph:

The use of a grapnel would only be required to locate a potential fault in buried sections of the route. It is important to note that the likely need for a repair along the buried section of the cable is very low. A break or other damage along the buried section might be caused by an earthquake, landslide, or perhaps a ship anchor, but is unlikely to be caused by a fishing trawler due to the depth of the cable burial. A trawler might damage an unburied section of cable, but location and repair of damage on an unburied

1 section of cable would not require use of a grapnel. For repairs to unburied sections of
2 the cable the Applicant would utilize an ROV to locate the fault and attach a line to the
3 existing cable. The cable would then be brought on board the repairs vessel for
4 diagnostic evaluation and repairs.

5 *The following text has been added to the end of Section 2.6 on page 2-32:*

6 The CSLC lease terms state that upon expiration or earlier termination of a lease, the
7 CSLC, at its discretion, may take title to any or all improvements, or require that all or
8 any portion of the cable be removed. The CSLC would conduct the appropriate
9 environmental review prior to removing any or all improvements in State waters, and all
10 permits or other governmental approvals will have to be obtained. Although a new
11 permit and environmental impact analysis would be required in the event of future cable
12 removal activities the potential impacts associated with the removal of the cable have, in
13 general, been addressed in the Draft EIR/EIS.

14 *Section 2.7 on page 2-33, Line 1-2, has been edited for clarification:*

15 ...for all required permits and approvals needed to construct, operate, and maintain,
16 ~~and remove~~ the Project.

17 *Table 2.7-1 has been modified to indicate that the NSF has funding approval authority*
18 *over the Project. Additionally, the proposed Project and Alternative Landing Area*
19 *Routes occur landward of the mean high tide line and would therefore require Coastal*
20 *Development Permit approval from Monterey County.*

21 **Table 2.7-1. Required Permits and Approvals**

Agency	Permit/Authorization/Consultation
Federal	
<u>National Science Foundation (NSF)</u>	<u>Major Research Equipment funding</u>
Regional/Local	
<u>County of Monterey</u>	<u>Coastal Development Permit (for the onshore component of the Project)</u>

SECTION 4: ENVIRONMENTAL ANALYSIS

The following text has been changed to page 4-2, lines 7-8, for clarification:

Therefore, no long-term ~~interference with~~ preclusion activities of commercial or recreational fishing ~~operators~~ activities in the project area would occur.

Information on other dredge disposal projects and the ATOC/Pioneer Seamount Cable have been added to Table 4-1 on page 4-9 as a potentially related projects.

Table 4-1. Summary of Related Projects

Name	Type	Description	Location	Status
<u>Other disposal projects</u>	<u>Dredge disposal activities</u>	<u>Dredge disposal occurs at multiple sites in Monterey Bay, including sub-tidal and beach replenishment locations.</u>	<u>Santa Cruz Harbor, Monterey Harbor, Moss Landing</u>	<u>Material is disposed at some sites regularly and others rarely. See descriptions in the text at the end of this section.</u>
<u>Acoustic Thermometry of Ocean Climate (ATOC)/Pioneer Seamount Cable</u>	<u>Scientific research</u>	<u>A 95-km cable installed off Half Moon Bay, CA, in 1995. The cable was used for acoustic tomography purposes.</u>	<u>California coast off of Half Moon Bay, about 45 miles northwest of the proposed MARS cable.</u>	<u>The cable has not transmitted data since a break in September 2002.</u>

The reader should note that an application for the Borehole Observatories project was filed in February 2005 after the Draft EIR/EIS was prepared. The following text has been added to the end of the discussion under "Installation of Borehole Observatories in Monterey Bay" on page 4-10 to clarify the status of the Borehole project:

As of the printing of this Draft EIR/EIS, an application for the project had not been filed with MBNMS. The cumulative impact analysis in this Draft EIR/EIS was based on available preliminary information since the application had not been filed. Explicit information about construction/boring techniques, precise number of test holes, and other project description data was not available. The project will be subject to a separate detailed environmental analysis, as required by NEPA, after the application is filed and MBNMS finds that it is complete for processing.

The following text has been added to page 4-13 as a new subsection after "SF-12 Dredge Disposal Site Operations."

1 **Other Disposal Projects**

2 In addition to the SF-12 Dredge Disposal Site, there are several other existing disposal
3 sites in MBNMS. Both Santa Cruz and Monterey Harbors have dredge disposal sites,
4 which were in use prior to MBNMS designation and are recognized by the Sanctuary.
5 Also, the Sanctuary recognizes a disposal site west of Moss Landing (Site SF-14),
6 which is a sub-tidal disposal site for fine-grained material. None of these disposal areas
7 are in the vicinity of the proposed cable Project and would not contribute to cumulative
8 effects of the proposed Project.

9 Three other disposal sites are located near Moss Landing: two beach replenishment
10 sites that are north of the harbor mouth have been rarely, if at all, used; and one beach
11 replenishment/subtidal disposal site that is on the south side of the harbor outside the
12 Sanctuary boundaries. The very limited use of these sites, coupled with the fact that the
13 proposed cable installation will be directionally drilled under this area (rather than
14 trenched through it) indicates that they will not contribute to cumulative effects.

15 In the past, there has been limited disposal of highway landslide materials by Caltrans
16 in the Big Sur area. However, no disposal has occurred in the past three to four years.
17 Even if disposal did occur during the time of the proposed Project installation, this
18 disposal area is not within or near the project study area. There is no potential for
19 landslide disposal to interact with the proposed Project or contribute substantially to
20 cumulative effects.

21 *A description of the ATOC/Pioneer Seamount Cable has been added to the end of this*
22 *section on page 4-13.*

23 **Acoustic Thermometry of Ocean Climate (ATOC)/Pioneer Seamount Cable**

24 The 95-km ATOC/Pioneer Seamount Cable was installed off the California coast near
25 Half Moon Bay in 1995 to connect an acoustic projector and hydrophone on Pioneer
26 Seamount to shore for performing acoustic tomography in the North Pacific. Acoustic
27 tomography is a tool used to study average temperatures over large regions of the
28 ocean. By measuring the time it takes sound to travel between known source and
29 receiver locations, sound speed can be determined. Changes in sound speed can then
30 be related to changes in temperature. The cable is located partially within the MBNMS.
31 It was laid directly on the seafloor and was not buried. The cable experienced two
32 breaks since its installation. Since the second break in September 2002, the cable has
33 not transmitted data and is currently inoperable. Development of a cable removal plan
34 is required by December 31, 2005, and actual removal of the cable is required by

January 2007. The ATOC/Pioneer Seamount Cable is located between 45 and 50 miles northwest of the proposed MARS cable.

Section 4.1: Air Quality

Page 4.1-3, line 12, has been revised to read:

...after meeting the standard in 1994 1990.

Table 4.1-3 on page 4.1-3 has been revised to read:

“State Designation: Ozone, Nonattainment-Transitional” and “State Designation: PM_{2.5}, Attainment”.

The second bullet of the significance criteria on page 4.1-5, line 29, has been revised to read:

Project emissions exceed thresholds established by the MBUAPCD for the determination of significance of air quality impacts for CEQA purposes or the applicability thresholds of the Federal General Conformity Rule. The MBUAPCD considers an impact significant if it would conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

The note below Table 4.1-4 on p. 4.1-7, line 19, has been revised to read:

...established by Section 5.3 ~~and 5.4~~ of the local CEQA Air Quality Guidelines (MBUAPCD 2004) and consultation with MBUAPCD staff (Brennan 2004).

Mitigation Measure AQ-1b, on page 4.1-8, line 27, has been revised to read:

...The amount of the contribution shall be agreed upon by the MBUAPCD taking into account the limited duration and timing of cable-laying activities.

Page 4.1-10, lines 17 to 20, has been revised as follows:

Because the Project emissions alone, including short-term emissions from marine vessels that are not accommodated in MBUAPCD's 2004 Air Quality Management Plan, would contribute substantially to existing violations during the short-term construction

1 phase, the short-term impact (Impact AQ-1) would also be cumulatively considerable
2 (Class II) and mitigation measures (MM AQ-1a and MM AQ-1b) would be necessary to
3 reduce the impact to a less than significant level.

4 **Section 4.2: Commercial and Recreational Fisheries**

5 *Page 4.2-13, lines 15 to 17, have been revised to read:*

6 ...commonly referenced as ~~Fishermen's Agreements~~ a mechanism to provide
7 necessary reimbursement provisions, have been incorporated into the considerations
8 and approvals of previous commercial fiber optic cable projects and such agreements
9 have provided a model for the aforementioned discussions.

10 *Page 4.2-14, line 27, has been revised to read:*

11 ...extensive ~~data base~~ database compiled over a period of three decades.

12 *The following additions and revisions have been incorporated into the discussion of*
13 *Impact CRF-2 on page 4.2-16, beginning on line 1:*

14 A study of an unburied cable (ATOC) off the west Coast of California (Kogan et al.
15 2003) indicates that some interactions between fishing gear (trawling) and unburied
16 cables have likely occurred. The ATOC cable is a 95-km long acoustic cable that was
17 installed in 1995 to transmit data from a passive, acoustic hydrophone array. ROV
18 surveys in 2003 suggest snagging of the cable may have occurred at least three times
19 since installation, although no gear has been observed entangled on the cable and no
20 formal reports have been made by the fishing community. As a general indication of the
21 potential for interactions between fishing gear and the ATOC cable, commercial trawl
22 information (trawl track data) indicates that 1,867 trawls were conducted in the cable
23 region between 1997 and 2003, with the highest number occurring in 1997 (471) and
24 the fewest in 2001 (139) (CDFG unpublished data).

25 In comparison to the ATOC data, a total of 2,475 trawls occurred over the proposed
26 MARS cable route during the same time period (CDFG unpublished data). However,
27 considering only the unburied segments of the MARS cable (~12 km), a total of 726
28 trawls were conducted in this area, with the greatest number occurring in 1998 (218)
29 and the fewest in 2003 (52). If these data are standardized to the number of trawls per
30 kilometer of cable (trawling intensity), more trawls were conducted over the MARS
31 unburied section of cable (range: 4.3-18.2 trawls/km) than the ATOC cable (range: 1.5-
32 5.0 trawls/km). Thus, there appears to be a greater potential for fishing gear and cable
33 interactions along the MARS route, compared to the ATOC route, although actual

conflicts would remain less than significant if the ATOC results are not or are only partly representative of interactions.

Of the two analyses described above, greater reliance on the documentation presented on page 4.2-14 of the Draft EIR/EIS is warranted because it is based on over four years of actual operating experience of a cable system that is comparable to the proposed Project, e.g., installation methodologies, situated in an area historically fished by trawlers, and comprising both buried and unburied portions. Therefore, potential impacts from potential snagging of the MARS cable by fishing gear remains adverse (Class III), but not significant because the potential impact remains below the Significance Criteria within Section 4.2 of the Draft EIR/EIS. See also response 5-3 in this regard.

Even though the potential for snagging the unburied MARS cable is considered not significant in “trawlable” areas (e.g., soft substrate and low relief cobble), although commercial fishermen still may choose not to fish in the cable vicinity out of due to concerns about potential snags and gear damage. However, in contrast, some trawlers may decide to fish in areas where the cable is not buried. Gear loss could occur if fishermen snag the cable or science node during trawling.

Section 4.3: Cultural Resources

Section 4.3.1 has been revised to indicate that the EIR/EIS is intended to provide information for Section 106 consultation and to clarify that the potential for an intact prehistoric archaeological site to be located along this limited extent of cable route is relatively low.

The first paragraph of Section 4.3, page 4.3-1, has been revised as follows:

This section describes existing conditions within the project area, assesses Project impacts, and identifies mitigation measures that would avoid or reduce significant adverse impacts on cultural resources to a less than significant level. This section is intended to provide information required for review and consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA). The study area for cultural resources, also known as the Area of Potential Effect (A.P.E.) as defined in 36 CFR 800.16(d), includes all ground surfaces that would be affected at Moss Landing and all submerged surfaces along the proposed MARS offshore cable route.

The section sentence in the third paragraph on page 4.3-1, lines 22-24, has been modified as follows:

The closest wreck identified in the geophysical survey data is located approximately 850 feet (260 m) northeast of the route (Fugro 2004), well outside the proposed cable route.

The first paragraph in Section 4.3.2, Regulatory Setting, page 4.3-5, has been modified as follows:

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires Federal agencies to take into account the effects of their undertakings on historic properties, i.e., cultural resources that are listed in or potentially listed in the National Register of Historic Places, and afford the State Advisory Council for Historic Preservation Office (ACHP) an opportunity to comment. By way of this EIR/EIS and two letters to the California State Historic Preservation Officer (SHPO), dated March 4, 2005, and May 4, 2005, MBNMS as the federal lead agency for the proposed Project, has initiated consultation under Section 106 of the NHPA as allowed under 36 CFR Part 800.8(c), Use of the NEPA process for section 106 purposes. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP Advisory Council on Historic Preservation...

Section 4.3.3, Significance Criteria, on page 4.3-6, has been modified as follows:

4.3.3 Eligibility and Significance Criteria

A cultural resources impact is considered significant if the Project adversely affects a resource that is:

- Listed in or eligible for listing in the California Register of Historical Resources,
- Otherwise considered a unique or important archaeological resource (including shipwrecks) under the CEQA, or
- Listed in or eligible for listing in the National Register of Historic Places (NRHP).

For the purposes of the NHPA analysis in this EIR/EIS, it has been assumed that all historical resources that may be impacted or affected are eligible for listing in the NRHP. In general, a project may have an adverse effect on a an eligible cultural resource if the resource would be...

The following text has been added to page 4.3-4, following line 20.

The potential for an intact prehistoric archaeological site to be located along this limited extent of cable route, however, is relatively low for the following reasons:

- The number of areas where buried relic channels, rivers, or stream features cross the cable route along this approximate 3.6-mile (2.25-km) extent substantially reduces the considered high prehistoric site sensitivity zones; and
- The potential for substantial buried prehistoric cultural sites containing deposits of food remains (i.e., animal bone, shellfish fragments, etc.) and subsistence remains (i.e., stone tool flakes, etc.) to remain intact is reduced due to the continuous wave action that would have acted against the integrity of the site deposits as sea level rose over time.
- The narrow width of the cable corridor substantially reduces the potential for encroaching within an unknown prehistoric archaeological resource.

Therefore, the probability of identifying an unknown, potentially significant archaeological resource along the approximate 3.6-mile (2.25-km) extent of cable route where sedimentation rates are low or don't exist is extremely low. However, this does not preclude the potential for significant impacts if an archaeological resource were discovered.

The following text has been added to page 4.3-10 as a new subsection after "No Project/Action Alternative":

4.3.7 Completion of Section 106 Consultation with the California SHPO

The MBNMS is waiting for the California SHPO to respond to its request for a letter of concurrence. Upon receiving the SHPO's response, MBNMS, as lead federal agency, will enter into any memorandum of agreement that may be necessary to resolve or mitigate potential adverse effects. Notification of the availability of any such memorandum of agreement is hereby given, by way of the Cultural Resources section of the EIR/EIS. Interested persons may contact MBNMS to obtain a copy or an update as to the status of the execution of any such memorandum of agreement.

Section 4.4: Geology and Soils

Tables 4.4-1 and 4.4-2 on pages 4.4-17 and 4.4-18 have been modified to indicate the Applicant would utilize only Single Armored (SA) and Single Armored Light (SAL) cable types during construction of the proposed Project.

1 **Table 4.4-1. Summary of Cable Route Subsurface Conditions (after Fugro 2004)**

Cable Location (Miles) (Km)	Percent Burial*	Water Depth (Feet) (Meters)	Expected Burial Depth	Slope/ Degree	Cable Type	Soil Type	Comments
0 to 18.6 0.0 to ±30	59.2	55 to 288 17 to 88	Full	< 5	SAL	Loose to medium dense sand or very soft to soft clay	Occurrences of dense/coarse sand.
±18.6 to 19.7 ±30 to 31.7	3.3	288 to 300 88 to 92	Partial	< 5	LWP SAL	Very soft clay over very dense sand	Locally no burial may be achieved because of rock outcrops.
19.7 to 25.2 31.7 to 40.6	17.5	300 to 1448 92 to 441	Limited / No burial	6-11	SPA SA	Very stiff to hard clay/rock	Extensive rock outcrops. San Gregorio Fault deformation zone. Some burial may be achieved up to 0.9 yards. Most difficult terrain of Project route.
25.2 to ±26.1 40.6 to ±42	2.7	1448 to 1556 441 to 475	Partial	6 to 8	LWP SA	Soft to very stiff clay, weakly cemented	Locally no burial may be achieved because of rock outcrops.
±26.1 to 31.7 ±42 to 51	17.6	1556 to 2923 475 to 891	Full	8 to <5	LWP SAL	Very soft to firm clay	Risk of plow sinkage.

2 *Percent of total cable route.

3

4 **Table 4.4-2. Descriptions of Cables (after Fugro 2004)**

Cable Type	Description
<u>Single Armor (SA)</u>	<u>Single-armor cable is suitable for rocky terrain and cable burial and provides protection from potential damage by fishing trawlers or anchors.</u>
Single Armor Light (SAL)	Used to a maximum depth of 1,500 meters, when armor is required, and in areas where good burial is predicted. Typically used on medium depth continental shelves, on rocky terrain, and in areas where trawling is a risk.
Special Application (SPA)	Used to a maximum design depth of 6,000 to 7,000 meters, when surface-laid on continental slopes and in deep-sea areas where extra abrasion protection might be needed.

Cable Type	Description
Light Weight Protected (LWP)	Typical installation is 1,000 to 4,500 meters, where rocky terrain may occur. Same application as for SPA cable but in more benign environments. Typical installation is from 1,500 to 8,000+ meters.

The sentence in the third paragraph on page 4.4-27, lines 23-24, has been edited for clarification:

The plow blade would penetrate the seafloor to a depth of just over 3 feet (0.9 m), displacing the sediment just ahead of the plow to create a trench ~~about 3 inches (7.6 cm)~~ up to 3 feet (0.9 m) wide depending on soil conditions.

The following text on page 4.4-27, line 33 has been edited for clarification:

... (2) create ~~only a 3-inch~~ a trench a maximum of 3 feet (0.9 m) wide depending on soil condition ~~trench~~;

Section 4.6: Marine Water and Sediment Quality and Oceanography

The Coastal Act and the National Marine Sanctuary Program have been added under Section 4.6.2 following the Rivers and Harbors Act on page 4.6-4.

Coastal Act

The California Coastal Act (PRC §30000-30900) is the principal planning and regulatory program for the coastal zone of California. The Act aims to preserve, protect, and enhance the California coastal zone as a distinct and valuable natural resource of vital and enduring interest to the people of California. Article 4 of the Coastal Act addresses the marine environment and the protection of marine resources, including water quality. Section 30231 states that the biological productivity and quality of coastal waters shall be maintained and, where feasible, restored by minimizing adverse effects, both to marine waters and fresh waters within the coastal zone. Section 30232 requires protection against spills of crude oil, gas, petroleum products, and hazardous substances, and requires effective containment and clean up of accidental spills.

Section 30600 of the Act requires any person wishing to perform development in the coastal zone to obtain a coastal development permit (CDP). The Coastal Commission retains CDP jurisdiction over tidelands, submerged lands, public trust lands, and lands within 100 feet of any wetland, estuary, or stream (PRC §30601(2)). Other areas of the project site located within the coastal zone are subject to the CDP authority of Monterey

County, pursuant to the County's certified LCP. Therefore, the project requires a CDP from the Coastal Commission for project activities located seaward of the mean high tide line and within 100 feet of a wetland, as well as a CDP from Monterey County for project activities located in the coastal zone landward of the mean high tide line. A CDP may only be approved if a development project is found to be consistent with the policies of the Coastal Act and the provisions of the certified LCP.

National Marine Sanctuary Program

Under the authority of the National Marine Sanctuaries Act (NMSA) (16 U.S.C. §§ 1431-1445c) the MBNMS was designated and is managed by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Sanctuary Program (NSMP) as part of the National Marine Sanctuary System. The NMSP regulations include prohibitions on specific kinds of activities, descriptions of sanctuary boundaries, and a permitting system to allow certain types of activities to be conducted within sanctuaries that would otherwise be prohibited. In addition to general regulations, each national marine sanctuary has its own set of site-specific regulations (15 CFR Part 922). A permit would be required for this Project from the NMSP pursuant to Sections 922.133 and 922.48 of the Program regulations for activities in the Sanctuary that would otherwise be prohibited.

The following text has been added to page 4.6-12, beginning on line 8.

The tentatively proposed drilling depth of approximately 50 feet (15 meters) below the seafloor has been chosen to hinder the release of drilling mud to the surface while remaining above relatively unknown subterranean sediments or rock formations that would adversely affect HDD operations and that may occur at greater depths. The proposed drilling depth is also similar to other HDD operations completed along the California coastline at a borehole depth of 50 feet (15 meters) below the seafloor. Recent, successfully completed HDD projects along the California coastline include AT&T (China U.S. and Japan U.S.), Global West, and Tyco/Hermosa Beach. These projects resulted in very limited, small quantity frac-outs, e.g., less than one barrel, or 42 gallons, of released drilling mud. Intensive monitoring on these projects, similar to that for the proposed Project, resulted in immediate cessation of drilling, complete dispersal of the frac-out plume within several hours, and successful completion of the bore.

SECTION 5: OTHER REQUIRED CEQA/NEPA SECTIONS

Section 5.4: Growth-Inducing Impacts of the Proposed Project

The following text has been added to page 5-3 at the end of the discussion under “Growth-Inducing Impacts of the Proposed Project”:

Although the proposed cable Project would not contribute to population growth, it may provide increased opportunities for growth in offshore research in MBNMS. By establishing a source of electrical power and real-time communication to remote offshore areas, the Project may attract other types of research activities that can connect to the cabled system. One example is the proposed Boreholes Observatories project, which is planned to connect to the cable Project to utilize the power system. With a power source and real-time monitoring, the proposed cable could facilitate technical development of new types of research and education projects that were previously infeasible due to lack of infrastructure. It is not possible to identify the types or numbers of projects that could occur as a result of the proposed Project, but it is reasonable to anticipate some additional research activity. It should be noted that the greater Monterey Bay area is currently host to over 40 research institutions; a substantial amount of research activity already takes place in MBNMS.

SECTION 6: MITIGATION MONITORING PROGRAM

Table 6.5-2 impact area Commercial and Recreational Fisheries has been modified to indicate the Applicant’s commitment for addressing gear entanglement and recovery. It has also been modified to indicate that the Applicant shall develop and implement a Marine Mammal Monitoring Plan during construction of the proposed Project.

1 Table 6.5-2. Monitoring Program for Applicant-Proposed Protective Measures

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Commercial and Recreational Fisheries	<u>In the event fishing gear cannot be removed from the cable by surface vessels, the Applicant will utilize an ROV to remove the gear from the cable. If all attempts to remove the gear fail, the gear would be left in place but rendered incapable of harvesting marine resources.</u>	<u>Sea route.</u>	<u>Notify MBNMS if cable snag and gear entanglement.</u>	<u>Verify that gear has been removed from cable and fishermen compensated for lost gear.</u>	<u>CSLC/ MBNMS</u>	<u>After cable installation.</u>
Commercial and Recreational Fisheries	In areas where cable burial is not possible, additional cable armoring <u>consisting of single armor light cable sheathing</u> will be used and fishers will be notified of locations of exposed cables.	Sea route.	Review plans for cable armoring prior to installation.	Verify that additional armoring is used in all locations where cable is exposed.	CSLC/ MBNMS	Before, during, and after cable installation.

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Marine and Near-Coastal Biological Resources	<u>Develop and implement a Marine Mammal Monitoring Plan that will be utilized during cable installation.</u>	<u>Sea route.</u>	<u>Confirm that the protocols prescribed in the approved Marine Mammal Monitoring Plan are followed during cable installation.</u>	<u>Verify that the protocols are understood by the marine mammal monitors and crew and that the protocols serve to avoid collisions and other direct effects on marine mammals in the area.</u>	<u>CSLC/MBNMS</u>	<u>During cable installation.</u>
Marine Vessel Transportation	<u>The Applicant will coordinate cable laying activities with the U.S. Coast Guard regarding publication of a notice in the U.S. Coast Guard's Local Notice to Mariners.</u>	<u>Sea route.</u>	<u>Notify U.S. Coast Guard regarding cable laying activities.</u>	<u>Verify that Notice to Mariners has been issued.</u>	<u>CSLC/MBNMS</u>	<u>Before, during, and after cable installation.</u>

APPENDIX

Draft EIR/EIS Public Hearing Transcripts

MONTEREY ACCELERATED RESEARCH SYSTEM CABLED OBSERVATORY
DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT
STATEMENT
PUBLIC MEETING
TRANSCRIPT OF PROCEEDINGS
SESSION 1

Taken on behalf of the Monterey Bay Aquarium Research
Institute at 8272 Moss Landing Road, Moss Landing,
California, before Melinda Nunley, CCR #9332, a Notary
Public within and for the County of Monterey, State of
California.

1

2 APPEARANCES:

3 Vicki Hill, Consultant for Monterey Bay Aquarium Research
Institute

4

Michelle Brown, Project Manager for California Lands
5 Commission

6 Keith Raybould, Monterey Bay Aquarium Research Institute

7 Jon Davidson, EIR/EIS Project Manager from Aspen
Environmental Group

8

9

--o0o--

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

MARS Project Draft EIR/EIS Public Meeting, Session 1, 4/7/05

1	I N D E X	
2		Page
3	Ms. Hill	4
4	Ms. Brown	9
5	Mr. Raybould	10
6	Mr. Davidson	15
7	Conclusion	23

8
--o0o--

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 Moss Landing, California, Thursday, April 7, 2005

2 4:10 p.m.

3

4 MS. HILL: Okay. You think we should start?

5 Hopefully everybody has found a parking space by now and

6 found the building. I'd like to welcome everyone here

7 today to this meeting that's being held jointly by the

8 California State Lands Commission and Monterey Bay National

9 Marine Sanctuary. My name is Vicki Hill as you can see on

10 the name tag, and I'm a consultant to the Sanctuary helping

11 them with environmental issues associated with this

12 project.

13 We are here today to present information on the

14 Monterey Bay aquarium Research Institute's proposed MARS

15 cable project. The main intent of the meeting today is to

16 provide information on it but more importantly to get

17 public comments.

18 Before we get started I want to take care of a few

19 housekeeping items and that is I hope everyone has signed

20 in on the sign-in sheet that's at the back table, and back

21 there there are speaker slips if anyone would like to speak

22 today, make comments on the environmental document. Also

23 there are agendas back there. I hope everyone got a copy

24 of it. Also we have copies of the Draft Environmental

25 Impact Report/Environmental Impact Statement, the EIR/EIS

1 on the back table as well, right, if anyone wants to take a
2 look at one during the meeting, and if you need to get a
3 copy of one for yourself, please feel free to ask.

4 We have several agency and applicant and
5 consultant representatives today. In fact I think we
6 outnumber any members of the public here, and I'll
7 introduce a few of these people. Unfortunately Dierdre
8 Hall from the Sanctuary could not be here today. She's the
9 project manager from the Sanctuary, but Holly Price is here
10 from the Sanctuary sitting in for her. From the State
11 Lands Commission we have Michelle Brown who is the project
12 manager for the environmental review process for the state
13 and Nancy Quesada who will be working -- raise your hand,
14 Nancy -- who will be working on writing the lease for the
15 project should the project be approved by the state. We
16 also have -- from the applicant we have Keith Raybould who
17 will be giving details about the project description and
18 Mandy Allen who's worked on the project as well. I know
19 that there's a lot of other people here from MBARI but I
20 don't think I need to go through everyone right now.
21 Finally we have our EIR/EIS contractor, Jon Davidson. He's
22 the project manager for Aspen Environmental Group who
23 prepared the EIR/EIS and he will go over the details, the
24 findings of the EIR/EIS later in the agenda.

25 So with that, I'd like to just give a brief

1 background on the joint EIR/EIS process for those of you
2 who might not be familiar with the process that has taken
3 place for this project. The application was filed in
4 February of 2004 and it was filed with both the State Lands
5 Commission and the Sanctuary, and shortly after that both
6 agencies got together and decided to do a joint
7 environmental document. Under state law -- let me back up
8 a second. Since the project crosses both state lands or
9 state waters as well as federal waters, it's subject to
10 both state and federal regulation. The state regulation is
11 the California Environmental Quality Act known as CEQA and
12 the Federal regulation National Environmental Policy Act,
13 NEPA. Since these 2 laws are very similar, we decided to
14 do one combined document rather than 2 separate documents
15 for the state and the feds.

16 The environmental document was prepared, as I
17 said, by Aspen Environmental Group under the direction of
18 the State Lands Commission and the Sanctuary, and the
19 consultant was selected jointly by the 2 agencies. And it
20 serves as an informational document. There is an important
21 point to make. It is not a decision document. It provides
22 information. It's full disclosure, and it doesn't make
23 recommendations on approval or denial of the project. Once
24 the environmental process is completed then the agencies
25 will make separate actions on the permit application and

1 they must consider information that's in the EIR/EIS in
2 making those decisions.

3 Let's talk about scoping for just a second. I
4 think Jon will probably cover some of the scoping issues as
5 well, but prior to starting preparation of the EIR/EIS, we
6 initiated a process called scoping that's required by both
7 state and federal law. The 2 agencies issued notices via
8 the Federal Register and mail, mailed out a number of
9 notices to a wide variety of agencies, Sanctuary users,
10 interest groups and other interested individuals. As a
11 result of the scoping process, we received only 7 comment
12 letters along with some verbal comments that were made
13 during a scoping meeting last June in this very same
14 location. Based on the scoping comments, on the
15 professional experience of the agency staff as well as the
16 environmental consultant, the work plan for the EIR/EIS was
17 developed.

18 So now we have the draft document. This is the
19 draft EIR/EIS and it was published on March 11th and it's
20 now out for public review for 45 days. At the end of that
21 45-day public review period, we will go through all the
22 comments and work with the consultant to prepare responses
23 to each comment that was made on the document. After that
24 we will prepare a final EIR/EIS in which all the comments
25 and responses will be included. Once that final document

1 is published, and we think that's around the 1st of July,
2 correct? We're hoping to get that out around the 1st of
3 July. Then the State Lands Commission will take action on
4 the project meaning they'll decide to either approve or
5 deny a lease for the project and they will hold a public
6 hearing associated with that. During the same time the
7 Sanctuary will be preparing a Record of Decision for the
8 project. This Record of Decision cannot be issued until 30
9 days after publication of the Final EIR/EIS. So that's the
10 process. Probably project approval or action -- action on
11 the project will take place by next summer, hopefully
12 August.

13 Just a couple other notes, other activities that
14 are happening right now, the document was sent out to a
15 number of agencies for review and those agencies will
16 probably use this document in making their decisions, such
17 as the Coastal Commission and the Army Corps of Engineers.
18 Also during this time I understand that the applicant and
19 the fishermen's representatives are working together to
20 develop a fishermen's agreement which will address issues
21 such as fishing gear loss and liability. So that's taking
22 place right now too.

23 I think that's all I have to say. With that I'd
24 like to turn it over to Michelle Brown from the State Lands
25 Commission who's going to spend a few minutes talking about

1 today's meeting and then we'll go on to the project
2 description that Keith will present. Thanks.

3 MS. BROWN: Hi. My name's Michelle Brown. I'd
4 like to thank you all for coming to this meeting. Again
5 most of the things I have to say Vicki's pretty much
6 covered but I have a little bit more.

7 MS. HILL: Sorry.

8 MS. BROWN: No, that's fine.

9 I'm a project manager for the California State
10 Lands Commission. As we said, this is a joint document
11 between the State Lands Commission and the Monterey Bay
12 National Marine Sanctuary and the purpose of this meeting
13 is for you to receive information about the project and for
14 us to hear your comments about the adequacy of the document
15 in addressing potential environmental impacts that may
16 result from the project. The purpose of this meeting is
17 not to discuss issues relating to the project or whether
18 you are for or against the project.

19 The draft EIR/EIS was released on March 11th and
20 comments must be received by the end of the 45-day review
21 period which ends on April 26th. We'll be taking comments
22 received today as well as those that are sent to us by fax
23 or by email or by regular mail and all those will be
24 responded to in the final document. The final document
25 will then be considered for certification in the near

1 future, most likely August by our commission as well as by
2 the Sanctuary.

3 Please make sure you've signed in on the sign-in
4 sheet and if you would like to speak today, we have speaker
5 slips. I'd like each person that would like to speak today
6 to please write down your name, your agency affiliation or
7 group affiliation so that our court reporter can properly
8 record you for the record and that we can respond to your
9 comments.

10 Now Keith Raybould will speak. He's going to give
11 a description of the project, and after Keith is finished,
12 then Jon Davidson will get into the details of the report.
13 Thank you.

14 MR. RAYBOULD: Okay. So what I'm going to go
15 through is a project description. I'm going to go through
16 the MARS location and cable route, the purpose of the cable
17 observatory, a description of the node and the trawl
18 resistant frame, shore landing, cable installation and
19 scheduling.

20 So the route starts at Moss Landing here and I'll
21 describe the shore landing in a short while. It goes
22 across the continental shelf to the north of the canyon
23 through this neck of the Smooth Ridge down to the node
24 that's here on Smooth Ridge. The depth of the node is
25 almost 3,000 feet. There's about 30 miles of cable, and

1 the shore landing here that I'll describe in detail in a
2 short while is through a horizontally directionally drilled
3 5-inch steel pipe.

4 The purpose -- the 2 main drivers and purposes for
5 the MARS Cable Observatory was first as a test bed. It's
6 a test bed for a larger regional cable observatory that's
7 going to be built soon funded by the National Science
8 Foundation as part of an Ocean Observer Initiative. This
9 larger test bed -- this larger cable observatory is off the
10 Oregon/Washington coast and it includes 30 or so nodes and
11 about 3,000 kilometers of cable. MARS is a single node and
12 50 kilometers of cable as a test bed for testing the
13 engineering that was necessary for building a cable
14 observatory of this scale. After this regional cable
15 observatory is built called NEPTUNE, MARS will be used for
16 testing instruments and methods for deploying instruments
17 prior to placing these instruments on this larger regional
18 cable observatory. That's one of the aims, as a test bed.

19 The other one is to perform science, area science
20 in the bay. There are many different science applications
21 being proposed that the observatory can be used for. I can
22 only just briefly mention 2 today in the time available.
23 One of them will be for the seismometer studies. These
24 are the faults that run through Monterey Bay. The San
25 Gregorio Fault runs right across here. MARS will be able

1 to power a permanently installed seismometer on the west
2 side of this fault. There are literally hundreds of
3 seismometers on the east side. By being able to locate a
4 seismometer on the west side that is able to get data
5 continuously and is powered continuously, it will provide a
6 lot of information on the mechanisms and locations of
7 seismic activity along these critical fault lines.

8 One of the other areas I was going to mention is
9 the application of using hydrophones on the cable
10 observatory. This is an example of some data taken which
11 shows whale calls here and this is a passing vessel. This
12 is some seismic activity and it shows some of the data that
13 can be taken with permanently installed cells such as MARS.

14 The cable will be buried to the maximum extent it
15 can, nearly 70 to 75 percent of the route. There's a
16 section just near Smooth Ridge where surface conditions
17 don't allow it to be buried. It's designed for a 25-year
18 lifetime after which it will be removed. During this 25
19 years new instruments will be designed and tested on the
20 MARS facility prior to being moved and used on the regional
21 cable observatory. These instruments will be located
22 within a 4-kilometer radius of the MARS node and then
23 connected and provided with powered communication by
24 service laid cables. The facility provides about 10
25 kilowatts of power and gigabits band width which is of

1 course a magnitude more than can be provided by
2 battery-powered self-contained instruments, and there's 8
3 instrument ports for connecting the instruments to it.

4 The node itself, that's shown here. This is
5 approximately 10 feet by 8 feet, weighs about 2 tons. This
6 is inserted inside a trawl resistant frame that you can see
7 here. This is the actual trawl resistant frame that's
8 being manufactured as we speak. This is the cable that
9 comes back to Moss Landing. These are the cables that go
10 out to the instruments that we'll connect to the ports on
11 here. So we can maintain this facility by bringing back
12 the node with our regular day vessel ships so there's no
13 need to bring extra vessels in for doing maintenance on the
14 system. All the electronics are contained in this node and
15 this can be retrieved on a daily mission to the location.

16 The shore landing, this is the entrance for Moss
17 Landing Harbor. The shore landing is just here. This is
18 the property that's owned by MBARI. There'll be a small
19 hut which is approximately the size of what you can see
20 here, and from this location there will be a horizontally
21 directionally drilled pipe which will go from that shore
22 landing location about 4700 feet to the other side of the
23 canyon. This is a profile of the HDD pipe. This is where
24 it enters on the shore side. It's located approximately 15
25 feet below the seabed surface and it exits here where the

1 cable will be inserted about 4700 feet offshore.

2 Cable installation, the cable is a one-inch
3 diameter cable. It's single armored, lightweight armor
4 protected. Those are 2 different types of cable. This the
5 armoring around here on the cable. It will be buried 70
6 percent of the route. It will take about 3 or 4 days to
7 install the cable and the node will take another 2 or 3
8 days and then the postlay inspection and burial which will
9 take 1 to 2 days so the entire operation is something no
10 longer than 8 or 9 days.

11 This is the cable laying vessel that we'll use for
12 installation. It's called the Alcatel. It's got
13 directional positioning. There's no need for any anchors
14 during the entire operation.

15 In terms of schedule, we're planning on starting
16 the horizontal directional drilling in September of this
17 year. This will be followed by the cable node installation
18 which, as I mentioned, will take somewhere in the order of
19 8 or 9 days to be done during this period, October,
20 November. We would like to do this to try and avoid the
21 southerly gray whale migration which is starting in
22 December. The shore landing installation and connection
23 back to utilities will then follow and the cable node
24 installation which will be done in December, the operations
25 starting in early 2006. And that's all I have for the

1 description.

2 MS. HILL: Are there any questions specific to the
3 project description? Everyone raise their hand at once.

4 Okay. Keith, you're getting off easy. No questions.

5 Okay. Jon Davidson from Aspen will now give an
6 overview of the EIR/EIS.

7 MS. DAVIDSON: One of the things I liked about
8 working on the environmental review for this project was
9 the look on people's faces I got when I told them I worked
10 on MARS.

11 I'm going to just kind of briefly give you an
12 overview of the findings of the EIR/EIS that we prepared.
13 First of all, the EIR/EIS was focused on 9 issues that the
14 lead agencies had identified in their initial review and
15 through the scoping process that Vicki already mentioned.
16 These are the 9 issues of a larger set of issues that were
17 considered potential to result in significant impacts and
18 so we focused the EIR analysis on these 9 issues. It turns
19 out that not all 9 had significant impacts but we didn't
20 know that until the analysis was completed. For the issues
21 that are not analyzed in the EIR/EIS, the reason why is
22 documented in the back of the document in section 5.7 in
23 your book.

24 If you're familiar with how these analyses are
25 done, it's a pretty standard approach that's taken. The

1 specifics vary by topic and the project itself, but if you
2 look at Section 4 of the document, the Impact Analysis,
3 just kind of the core of the EIR/EIS, you'll see that the
4 sections are all structured in a similar way and that's
5 what I'm stepping through here. And the first is to
6 establish current conditions, baseline conditions for each
7 topic that's analyzed, and so there's a description of a
8 current condition and there's also a description of
9 applicable regulations. After that, significance criteria
10 are presented, and what significance criteria tend to do is
11 to set a threshold to use to measure the significance of
12 the impacts. So if we know that the threshold is
13 triggered, then we're going to consider that impact
14 significant.

15 The -- the impacts we evaluate against those
16 criteria and there's a determination made on whether an
17 impact is significant or not, and you'll see a
18 classification system in the EIR/EIS which is significant
19 unavoidable impacts. These are impacts that can't be
20 mitigated to less than significant level. Those are what
21 we call Class 1 impacts. There's Class 2 impacts which are
22 potentially significant but we have high confidence that
23 the mitigation measures recommended in the document will
24 reduce them to less than significant level. Class 3 are
25 impacts that are adverse but not significant in magnitude

1 or severity. There's also a Class 4 which we really didn't
2 utilize but that's beneficial impacts. There's also a
3 category called no impact. Basically we don't give it a
4 classification. It just isn't an impact. There may be a
5 significance criteria that says here's something that could
6 occur and we analyze it and realize it wouldn't occur.

7 In general across those 9 issue areas that I
8 showed you earlier, we identified 34 impacts that were
9 potentially significant -- excuse me. They were
10 significant -- they were either less than significant,
11 potentially significant, or significant and unavoidable.
12 It turns out we had no significant and unavoidable. We
13 just had Class 2 and Class 3, which is significant but can
14 be reduced to less than significant level or less than
15 significant. So of those, the ones that are most important
16 to our analysis are the 4 that we've determined to be
17 potentially significant and those are impacts related to
18 air quality, cultural resources, marine vessel traffic and
19 noise, and all those impacts, as I said, can be reduced to
20 a less than significant level with the mitigation measures
21 that are recommended in the EIR/EIS, and because we have
22 such a small number, just 4, I'm going to go through each
23 impact briefly.

24 First the air quality impact will be analyzed
25 which is basically a violation of the threshold established

1 by the Monterey Bay Unified Pollution Control District for
2 construction emissions, and these are basically emissions
3 from the cable laying vessel and the other vessels that
4 will be used in the cable laying operation. Often for
5 land-based emissions, the construction equipment emissions
6 aren't considered significant from the way that the local
7 pollution control district defines significant because they
8 build that assumption of that type of construction vehicle
9 operation into their planning efforts, but they haven't
10 incorporated into the planning marine vessel construction
11 so we have to consider that as a separate impact. This
12 impact can be mitigated to less than significant level
13 through the use of low emission fuels which are available
14 for some of the support vessels and the on shore
15 construction, primarily for the horizontal directional
16 drilling that's proposed as part of the project, and then a
17 program that the air pollution control district has in
18 place, the standard mitigation that they use is to
19 contribute to an emission reduction program, and we have
20 several options there open from the district to determine
21 what is the appropriate contribution to an emission control
22 program.

23 The second impact is the cultural resources
24 impact. Basically the MBARI has designed the cable route
25 such as to avoid any known coastal resources, and by

1 coastal resources we're primarily talking about shipwrecks.
2 Those are the historical resources. There's potential,
3 however, that in some parts of the cable route, even though
4 they have not been detected, there is potential based on
5 the depth of the disturbance of the seabed that there could
6 be prehistoric resources, basically cultural resource sites
7 that were established about 18,000 years ago when the sea
8 level was much lower and some areas out in the bay were
9 actually dry land and able to be used by Man, so the
10 mitigation there is to more closely review the data that's
11 already been collected in selecting the cable route, and
12 the feeling is that with the combination of geologists and
13 qualified archeologists that they can then determine
14 whether there's anything that needs more specific
15 investigation with say an ROV to see if there's anything
16 that might be a significant historic impact.

17 The next impact relates to marine vessel traffic.
18 Basically the concern is here is vessels operating too
19 close to one another, and particularly the cabling vessel
20 which is a vessel with low maneuverability, and there's
21 supposed to be a buffer of one mile around such a ship when
22 it's operating. There's a possibility that another
23 research project which is the hole boring project which is
24 close to the planned location of the science node could
25 happen at the same time. If that's true, then there's the

1 possibility that the 2 operations could be within a mile of
2 one another, so the mitigation is simply to do some
3 planning to avoid that, if the ships are operating at the
4 same time, the boring ship and the cabling vessel, that
5 their scheduling be such that they wouldn't be operating at
6 the same time.

7 The last potentially significant impact had to do
8 with noise generated during construction. This is a fairly
9 common impact. As we all know, construction equipment
10 produces both intermittent and continuous noise levels that
11 are pretty high and it's often true that if there's a
12 sensitive receptor nearby, it would be exposed to high
13 noise levels, so the Monterey Bay County Noise Control
14 Ordinance specifies that at 50 feet no construction noise
15 is to exceed 85 decibels. We think there's a possibility
16 that during the horizontal directional drilling activity,
17 that could exceed that slightly, so there's some measures
18 recommended to avoid that exceedence of that level which is
19 basically to shield their operating theatre and there's
20 several methods available. So those are the 4 potentially
21 significant impacts. All were reduced to a less than
22 insignificant level.

23 So another thing I wanted to talk about briefly
24 were the alternatives being evaluated. The consultant team
25 and the lead agencies got together and looked at several

1 alternatives, some of which were originally proposed by the
2 applicant and dismissed and reevaluated those as well to
3 see if they had merit in terms of the potential to be a
4 reasonable alternative and if they had potential to reduce
5 or avoid impacts of the proposed project, and so of the 6
6 original alternatives, we determined that there were 3,
7 including the alternative of doing nothing, the no action
8 project, the no action alternative, that there were 3 that
9 deserved a full evaluation in the EIR. So those are
10 basically 2 alternative landing locations, and the basic
11 cable route as you can see would be the same as proposed by
12 MBARI but it would come ashore and land at sundry
13 locations. And as it turns out, after we analyzed these,
14 the impacts were very similar. They were the same. There
15 were some differences but generally much more similarity to
16 what we had determined before. And just to briefly show
17 you what these alternative landing locations are,
18 Alternative 1 was a variation on a concept that MBARI had
19 previously developed for landing the cable. That was to
20 enter the pipeline that is owned by Duke Energy to serve --
21 formerly serve the Moss Landing Power Plant. It's no
22 longer utilized, but it is a pipeline. It's in good
23 condition. It extends out from the shore, and it would be
24 to bring that cable to that pipe and pull it to shore
25 through that pipe. So we looked at the impacts of that and

1 it also involved horizontal directional drilling across the
2 harbor entrance to Moss Landing.

3 The second alternative was to the south which is
4 to bring the cable across the head of the Monterey Canyon
5 and run it parallel to shore and bring it to the location
6 of a planned pier that's going to be built at the end of
7 Sandholdt Road there by Moss Landing Marine Laboratories.
8 This pier isn't under construction yet but the idea is that
9 when it is built, the cable could come in at that location,
10 attach to the pier, and land using that method.

11 So that's a summary of the EIR/EIS, just an
12 overview. There's a lot more information I was going to
13 present to you in the document, but that's an overview of
14 the alternatives and the impacts that are potentially
15 significant.

16 MS. HILL: Thanks, Jon.

17 Well, is there anyone here who would like to make
18 any public comments at this time? No one? Not one little
19 comment from anyone? Okay. Are there any other questions?
20 No? Okay. Michelle, did you have some closing remarks or
21 did we cover them already? Any next steps?

22 MS. BROWN: No.

23 MS. HILL: Okay. We've pretty much covered
24 them.

25 MS. BROWN: If we have no further questions, or no

MARS Project Draft EIR/EIS Public Meeting, Session 1, 4/7/05

1 questions at all rather or comments, then this will close
2 the session and we will be having another public meeting at
3 6:30 p.m. Thank you.

4 (The meeting ended at 4:42.)

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 STATE OF CALIFORNIA)
) ss.
2 COUNTY OF SANTA CRUZ)

3

4

5

6 I, MELINDA NUNLEY, a Certified Shorthand
7 Reporter, License Number 9332, and a Notary Public in and
8 for the State of California, do hereby certify:

9 That the said Transcript of Proceedings was
10 reported by me in machine shorthand at the time and place
11 therein named and was thereafter transcribed by means of
12 computer-aided transcription, and the same is a true,
13 correct and complete transcript of said proceedings, to the
14 best of my ability.

15 I further certify that I am not of counsel nor
16 related to any of the parties hereto, nor in any way
17 interested in the outcome of these proceedings.

18 IN WITNESS WHEREOF, I have hereunto subscribed my
19 name and affixed my official seal this 14th day of April
20 2005.

21

22

23

24

25

Certified Shorthand Reporter
and Notary Public

MONTEREY ACCELERATED RESEARCH SYSTEM CABLED OBSERVATORY
DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT
STATEMENT
PUBLIC MEETING
TRANSCRIPT OF PROCEEDINGS
SESSION 2

Taken on behalf of the Monterey Bay Aquarium Research
Institute at 8272 Moss Landing Road, Moss Landing,
California, before Melinda Nunley, CCR #9332, a Notary
Public within and for the County of Monterey, State of
California.

1

2 APPEARANCES:

3 Vicki Hill, Consultant for Monterey Bay Aquarium Research
4 Institute

5 Michelle Brown, Project Manager for California Lands
6 Commission

7 Keith Raybould, Monterey Bay Aquarium Research Institute

8 Jon Davidson, EIR/EIS Project Manager from Aspen
9 Environmental Group

10 Marsha McNutt, Monterey Bay Aquarium Research Institute

11

12

--o0o--

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

1	I N D E X	
2		Page
3	Ms. Hill	4
4	Ms. Brown	8
5	Mr. Raybould	9
6	Mr. Davidson	14
7	Public Comments:	
8	Tom Hart for Moss Landing Fishermen's Association	21
9	Conclusion	
10		
11	--o0o--	
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

MARS Project Draft EIR/EIS Public Meeting, Session 2, 4/7/05

1 Moss Landing, California, Thursday, April 7, 2005

2 6:35 p.m.

3

4 MS. HILL: I think we'll get started here. Unlike
5 our earlier meeting, we do have a member of the public
6 here, so I'm going to give sort of an abbreviated
7 introduction but we'll still want to go through the project
8 description and the summary of the EIR/EIS. Sorry, guys.
9 Anyway, welcome. Welcome all one of you.

10 MS. BROWN: One and all.

11 MS. HILL: Welcome to today's -- or this evening's
12 meeting which is being held jointly by the California State
13 Lands Commission and the Monterey Bay Marine Sanctuary. I
14 think we all know the purpose of this meeting. I am a
15 consultant to the Sanctuary. My name is Vicki Hill, and we
16 are here to present information on the joint EIR/EIS for
17 the MARS Cable Observatory Project which is being proposed
18 by the Monterey Bay Aquarium Research Institute, MBARI.
19 Did you sign in here?

20 MR. HART: Yes, I did.

21 MS. HILL: And would you like to fill out a
22 speaker slip?

23 MR. HART: No, I can pass on that.

24 MS. HILL: Okay. Well, if you change your mind,
25 you can fill out a speaker slip.

1 MR. HART: Unless you scare me with something you
2 say, and I'm listening.

3 MS. HILL: Okay. And you know that if you don't
4 make comments today, you have till April 26th to submit
5 written comments.

6 MR. HART: Right.

7 MS. HILL: And you also have a copy of the
8 EIR/EIS?

9 MR. HART: Yeah.

10 MS. HILL: Okay. Great. Other key agency and
11 applicant and consultant staff that we have here today
12 include Michelle Brown and Nancy Quesada from the State
13 Lands Commission. On the applicant's side we have Keith
14 Raybould and Mandy Allen. Keith will give us some details
15 on the project description in a few minutes, and then our
16 EIR/EIS consultant is Jon Davidson who is the project
17 manager for Aspen Environmental Group and Aspen was
18 responsible for preparing the EIR/EIS.

19 Okay. Just a little bit of background information
20 on the whole joint EIR/EIS process. The application was
21 filed in February of 2004 with both the State Lands
22 Commission and the Sanctuary, and shortly after that the 2
23 agencies agreed to prepare a joint environmental review
24 document to address the legislative -- or the legal
25 requirements of both the state and the federal governments.

1 Since the proposed cable crosses both state and federal
2 lands or waters, both the California Environmental Quality
3 Act for the state and the National Environmental Policy Act
4 for the federal government apply to this project. Since
5 these 2 legal requirements are very similar, the agencies
6 agreed to do a joint EIR/EIS. The document was prepared,
7 as I mentioned, by Aspen Environmental Group under contract
8 to the State Lands Commission and selected jointly by the
9 Sanctuary and the State Lands Commission.

10 It's really important to point out that the
11 EIR/EIS is not a decision document. It is purely an
12 informational document. It's a full disclosure analysis
13 presenting the environmental impacts of the proposed
14 project as well as alternatives and it doesn't include
15 recommendations on approval or denial of the project. Once
16 the document is finalized, it will be up to state and
17 federal decision makers to approve or deny the project and
18 they must consider information in the EIR/EIS in making
19 their decision.

20 Prior to starting the EIR/EIS, we conducted a
21 process called scoping that was initiated last May. We
22 solicited comments from interested agencies, public
23 interest groups, Sanctuary user groups and interested
24 individuals via a notice that was published in the Federal
25 Register and mailed out to a rather long mailing list.

1 After the notice was sent out, we held scoping meetings
2 last June here during which several fishermen and fishermen
3 representatives spoke. As a result of the scoping process,
4 we received 7 comment letters and they are summarized in
5 Appendix B of the EIR/EIS.

6 Now we're at the stage of reviewing the Draft
7 EIR/EIS. It was published March 11th and it's out for
8 public review through April 26. After the close of the
9 45-day public review period, we will get together with the
10 EIR/EIS consultant to prepare complete and thorough
11 responses to each and every comment that's made on the
12 document. Once those responses are completed, the Final
13 EIR/EIS will be published which will include all the
14 comments and all the responses. After the final document
15 is released, each permitting agency will be required to
16 take a separate action on the project so the joint process
17 sort of ends there once the final document is published.
18 The State Lands Commission, since it's the lead agency
19 under CEQA, will take the first action among the state
20 agencies, and the Sanctuary will take the federal action
21 which is called a Record of Decision. There are other
22 agencies that also have to act on the project, the Coastal
23 Commission, Army Corps of Engineers, and I'm sure there's
24 several others.

25 I think that's all I have for the -- the process.

1 We are expecting that the final document will come out in
2 the first part of July and that a decision by the agencies
3 will be made by August of this year.

4 I'll now turn it over to Michelle who will make
5 some comments and then we'll hand the meeting over to Keith
6 to go over the project description. Thanks.

7 MS. BROWN: Hi, my name's Michelle Brown. I'm
8 with the State Lands Commission. I'm the project manager
9 for this project. The purpose of this meeting is for you
10 to receive information about the project and for us to hear
11 your comments about the adequacy of the draft environmental
12 document which was issued --

13 MR. DAVIDSON: March 11th.

14 MS. BROWN: -- March 11th. Yes. We have a
15 sign-in sheet on the table in the back that we'd like you
16 to complete for our records and also give your address if
17 you'd like to be placed on the mailing list for future
18 information on this project. Also there are speaker slips
19 beside the sign-in sheet, and I would ask that each person
20 who would like to comment on the project to please write
21 your name and agency or your affiliation on the cards and
22 bring them up to us at the front table. This will help the
23 court reporter properly identify you for the record and
24 will help us respond to your comments in the final
25 document.

1 Sorry. Now Keith Raybould from MBARI will be
2 presenting a description of the project, and following him,
3 Jon Davidson will give the overall details of the
4 environmental document.

5 MR. RAYBOULD: She said that hopefully. I wonder
6 if the projector's been switched off.

7 I'm going to give a project description and I'm
8 going to go through the proposed node location and cable
9 routes, purpose and need for the project, a description of
10 the node and the trawl resistant frame, the shore landing,
11 the type of cable and the installation process and then
12 finish with the schedule for the installation.

13 MARS route is shown here. It goes from Moss
14 Landing across the north of the canyon. The node is
15 located here on Smooth Ridge. There's 53 kilometers of
16 cable which is about 30 miles of cable. The node is in
17 approximately 3,000 feet of water depth. The shore landing
18 here I'm going to describe in detail towards the end but
19 the shore landing goes through a 5-inch horizontally
20 directionally drilled steel pipe.

21 The purpose and need for the project, there's 2
22 major purposes. One is as a test bed for a larger facility
23 that will be built in the future over the next few years.
24 This other major project up off the Oregon/Washington coast
25 is called NEPTUNE. It includes about 3,000 kilometers of

1 cable, approximately 30 nodes, and MARS will be a test bed
2 for first of all testing the technology that will be used
3 to build this NEPTUNE test bed. We have 50 kilometers of
4 cable with a single node, but it's an important step
5 towards realizing this larger facility later on which
6 hopefully should start in about a year or 2. Once this
7 regional cable observatory is built off Oregon/Washington,
8 MARS will be used for testing the instruments, testing
9 installation procedures for instruments on a regular basis
10 over its lifetime prior to instruments being located and
11 used on this cable observatory, NEPTUNE.

12 The other major purpose for MARS is for the
13 support of science. It enables a whole new way of doing
14 oceanography by providing power and band width which is
15 very much in excess of what can be made available with
16 stand-alone battery-powered instruments. Many different
17 science applications being proposed for MARS. I'm just
18 going to mention 2. This one here is the San Gregorio
19 Fault and other fault lines that run across the bay. MARS
20 will be located here. That will allow us to install a
21 permanently powered seismometer to the west of the San
22 Gregorio Fault. There are many instruments, hundreds in
23 fact, on the east side. This will be the only seismometer
24 located on the west of the fault, and this gives us some
25 very valuable information on understanding the fault

1 mechanisms and the location of seismic activity in the
2 region we live in.

3 This other one here is data from a hydrophone and
4 MARS will be used to support a hydrophone. This is
5 frequency and this is time. Here is signals from a whale
6 call, so it can be used for monitoring whale migrations and
7 patterns. This is seismic activity that was recorded.
8 This is a passing ship. So this will allow continuous
9 science capability for monitoring whale activities among
10 other things. There are many other scientific activities
11 proposed. I don't have time to go through all of them.
12 The Monterey Cavity is very active and we will be able to
13 instrument and try and understand what actually formed this
14 canyon going into Moss Landing.

15 The cable itself will be buried to the maximum
16 extent that we possibly can along the route. It's about
17 70, 75 percent will be buried. There's an area on the neck
18 of Smooth Ridge where the substrate is too hard for the
19 burial, but that's in the order of about 20 percent of the
20 cable that cannot be buried.

21 The facility has been designed for a 25-year
22 lifetime. During that lifetime new instruments will be
23 continually designed in different places around the country
24 and installed on MARS for testing. These instruments will
25 be placed within a radius of 4 kilometers of the MARS node

1 on Smooth Ridge and connected by a very lightweight cable
2 that will provide power to these instruments. The MARS
3 node itself can support 8 of these cables to instruments
4 within this radius. It will provide 10 kilowatts of power
5 and gigabits of band width communication between these
6 instruments and the shore, and this is, as I said, a
7 magnitude more than what can be done at the moment with
8 battery-powered instruments, so it will provide a whole new
9 way of doing oceanography from the bay.

10 The node itself is in 2 pieces. There's this part
11 here which is called the node. This is inserted inside the
12 trawl resistant frame so it will be protected inside there.
13 This is the cable that comes back to Moss Landing. These
14 are the cables which go out to the individual instruments
15 around the node. It's been designed in this way so the
16 unit here is trawl resistant. The electronics, the light
17 components are inside this node so that they can be easily
18 brought back to shore for maintenance. There will be no
19 need to bring the cable ship for repairs if there's
20 problems with the electronics. We can bring this node back
21 on a routine basis using the ships that are in and out and
22 in operation daily from Moss Landing. This is the trawl
23 resistant frame itself. It's being manufactured and you
24 can see it matches up with the original design.

25 Shore landing, the shore landing is here. From

1 this position there'll be -- finally there'll be a very
2 small hut there for the power supplies. From this location
3 there will be a horizontally directionally drilled pipe
4 that will be drilled from here across the Moss Landing
5 harbor entrance along a distance of approximately 4700 feet
6 to an exit location here. After drilling, the pipe that
7 was used for drilling will be left in place. It's a 5-inch
8 diameter steel pipe. The cable will enter the pipe at this
9 location and then come through to the shore landing.

10 This is a cross section of the drill route. This
11 is the entrance here. It actually goes approximately 50
12 feet below the ocean surface and the exit point is here
13 4700 feet, as I stated, to the other side of the canyon.

14 For cable installation, this is the vessel for
15 cable installation. It's the Alcatel a cable laying
16 vessel. The cable is approximately one inch in diameter.
17 It's armored. It's single armored and a lightweight
18 protected cable, and as I mentioned, it will be buried
19 approximately 70 percent of the route.

20 The installation of the cable itself with this
21 vessel will take 3 or 4 days. The node will take a further
22 2 or 3 days to install, and then we'll postlay inspect and
23 do postlay burial of the cable where needed. That will
24 take another 1 to 2 days. The schedule for the
25 installation, the HDD we hope to start September 2005. The

1 node installation will then follow the HDD and we plan this
2 in October/November this year, and we really want to get
3 this installation completed before the gray whale southern
4 migration comes about along the coast. The shore landing
5 will be installed November/December ready for operations in
6 early 2006. That's all I have for a project description.
7 Any questions?

8 MS. HILL: No questions? Okay. Thanks, Keith.

9 Okay. Jon Davidson will take over to summarize
10 the EIR/EIS findings.

11 MR. DAVIDSON: I'll just briefly summarize some of
12 the highlights of the Environmental Impact
13 Report/Environmental Impact Statement, and primarily I want
14 to focus on what's critical in this type of document which
15 is the impacts that are considered potentially significant.

16 First we started by -- with the decision to
17 analyze these 9 issue areas on the screen. These were
18 topics that, through the preliminary investigation of the
19 project or the preliminary evaluation of the project by 2
20 lead agencies and through the scoping process that Vicki
21 mentioned, these were topics that were potential leads to
22 result in significant impacts, and as a result, the
23 environmental document focused on just these topics in
24 detail. It turned out not all of them resulted in
25 significant impacts when it was finally analyzed. And then

1 in the second part, if you're interested, in the EIR, you
2 can find explanations of the topics that weren't considered
3 as significant and the reasons why they weren't analyzed.

4 The approach to the analysis of the Environmental
5 Impact Report/Environmental Impact Statement is pretty
6 standard if you're familiar with these types of documents.
7 If we start in Section 4, which is the impact analysis,
8 kind of the core of the document, for each topic we start
9 by discussing current conditions and establish the baseline
10 we're going to compare those impacts to. We're also
11 investigating the critical regulations and describing those
12 so you know what regulations are going to be applied to the
13 project in addition to whatever is imposed through the
14 EIR/EIS process or through the approval process that the
15 project has to go through.

16 And in order to compare the impacts to current
17 conditions and determine what's significant, which is the
18 key consideration, we established significance criteria,
19 and these are thresholds that we can use to determine
20 whether an impact is significant. Basically if it meets or
21 exceeds a threshold, then we consider that significant, and
22 those are criteria that are developed by the 2 lead
23 agencies in consultation with the EIR/EIS consultants. So
24 the impacts are then identified and evaluated against those
25 significance criteria, and for those impacts that trigger

1 the significance criteria, we identify them as potentially
2 significant impacts and then we apply mitigation to those
3 potentially significant impacts to determine if we can
4 reduce those impacts back down to a level that is not
5 significant.

6 There were 34 impacts identified in the Draft
7 EIR/EIS. These include 2 types of impacts, those that are
8 potentially significant but can be mitigated to less than
9 significant level, what we call Class 2 impacts, and then
10 Class 3 impacts were also identified, and those are impacts
11 that are adverse but were not significant enough or were
12 not large enough in magnitude or severity so that we would
13 call them significant. We didn't have any impacts that are
14 what we call Class 1 impacts which means that they are
15 significant and cannot be reduced to a less than
16 significant level.

17 So the 4 impacts that are potentially significant
18 were in the 4 areas listed on the screen which are air
19 quality, cultural resources marine vessel traffic and
20 noise. As I said, all of these can be reduced to a less
21 than significant level with the mitigation measures
22 suggested in the Draft EIR/EIS. Since they're so few, I'm
23 going to go through each one individually.

24 The first potentially significant impact relates
25 to air quality, and this is an impact that is fairly

1 typical with construction activities, and that is that the
2 various equipment, vehicles, in this case vessels, that are
3 involved in the construction process will produce emissions
4 from their operations, and based on the calculations in the
5 document, a threshold established by the Monterey Bay
6 Unified Air Pollution Control District will be exceeded,
7 the daily threshold, and therefore, that's our trigger for
8 considering the impact significant. The mitigation
9 measures that are recommended by the air pollution control
10 district, the first is to use certain types of low emission
11 fuels for diesel vehicles. There are only certain vehicles
12 that those can be applied to but there are certain fuels
13 available that can help reduce the emissions, and the other
14 is to contribute to various programs that are run by the
15 Air Pollution Control District that don't reduce the
16 impacts of this project but are paid into a program to
17 offset other emissions in the region and have a positive
18 effect on air quality.

19 The second impact is a cultural resources impact.
20 Basically the applicant, MBARI, has done a good job of
21 selecting a route that avoids any direct effects to known
22 cultural resources, and the cultural resources we're
23 currently concerned with in that regard is shipwrecks, so
24 they've avoided any known shipwrecks and they've done
25 reconnaissance of the route to make sure there are not any

1 unknown shipwrecks that they may have. So far there aren't
2 any. The one concern, though, is that there could be
3 prehistoric resources, and those are basically sites that
4 may have been established when sea level was much lower and
5 thousands of years ago Man may have used some of these
6 areas that are now submerged and there may be some cultural
7 resources, cultural resource sites along the path of the
8 cable that haven't been identified so far, so the
9 mitigation for that is to more closely examine the data
10 that the applicant has already developed in the second
11 route, but to look at it from a different point of view,
12 and that's to combine the expertise of geologists and
13 archeologists in that respect and see if there's anything
14 that makes them think that there might be cultural resource
15 sites there and determine if that's the case and so avoid
16 those locations.

17 The other potentially significant impact is the
18 cumulative risk of conflict with vessel operations out in
19 the bay, and that has to do with the fact that the cabling
20 vessel would have to operate near or potentially near
21 operations of another research project which is a bore hole
22 project which would be located in close proximity to the
23 location of the science node, so if the 2 vessels are
24 operating at the same time and in close proximity, that
25 could be a potential problem and there's actually a

1 regulation that requires that vessels of this type, which
2 are vessels of limited mobility, that there be a one mile
3 buffer around each other, that these vessels should stay at
4 least one nautical mile away. There's potential at least
5 that the 2 projects could have vessels that are closer than
6 that, so the mitigation is to schedule the operations but
7 to continue to coordinate them so that there is not a need
8 for the vessels to be operating at the same time in close
9 proximity.

10 The final measure is a noise mitigation measure.
11 This is for the terrestrial portion of the project which is
12 the shore landing and the shore facility. There's
13 horizontal directional drilling proposed as part of the
14 coast project to bring the cable to shore through a conduit
15 that Keith described, and due to the nature of the
16 equipment that's being used, the noise levels from that
17 equipment could exceed 85 decibels at a distance of 50 feet
18 which is a threshold that's been established in the
19 Monterey County Noise Control Ordinance as a significant
20 level of noise for construction activities, and so because
21 exceeding that threshold is possible, we called that impact
22 significant. The mitigation is to muffle or shield the
23 construction area. There's several techniques available.
24 Any one or a combination of those could achieve noise
25 reduction outside the construction area. So those are the

1 4 potentially significant impacts.

2 The other thing I wanted to mention briefly would
3 be the alternatives we considered. The lead agencies and
4 the applicant considered various alternatives, and there
5 were actually 6 including the no project alternative where
6 they would not move forward with the project at all. Those
7 are the preliminary set of alternatives that we started
8 from to examine them. Then we narrowed them down to 3
9 alternatives that seemed worthy to carry forth to full
10 analysis, meaning that these are the alternatives that are
11 feasible and capable of achieving the objectives of the
12 project and also potentially avoid impacts that the
13 proposed project might have. So those turned out to be the
14 no action alternative and 2 alternative landing locations,
15 so instead of landing in the method that's proposed right
16 now, which is horizontal directional drilling through a
17 conduit that extends offshore, to instead land the cable in
18 a couple different ways I'll show you in a moment, and
19 the -- it turns out that after we did the analysis, the
20 impacts are fairly similar. They're slightly different,
21 but not substantially different than the proposed project.
22 And these are the 2 landing alternatives. The northerly
23 one which is kind of the purple line is a variation on a
24 landing concept that MBARI considered earlier which is to
25 land the pipe -- or land the conduit -- excuse me, land the

1 cable through an existing pipe which is owned by Duke
2 Energy. It's a pipe that's not used anymore but it's in
3 good condition and extends out from the shore so that what
4 they would do is to bring the cable to the end of that
5 pipe, then pull the cable through the pipe and bring it to
6 shore that way. This would still involve some horizontal
7 directional drilling across -- beneath really the entrance
8 to Moss Landing Harbor to get to the same location that the
9 applicant proposes to land in the proposed project on the
10 shore facility. The other alternatives are further to the
11 south of the ridge line on the map, which is to basically
12 cross the mouth of Monterey Canyon at the head of the
13 canyon and parallel to shore to a location where Moss
14 Landing Marine Laboratories is planning to construct a new
15 pier. The cable would be brought to that pier, brought to
16 shore along the pier to the MBARI facilities.

17 So that's -- that's the summary of the EIR/EIS.
18 There's a lot more detail in the document but that's the
19 highlights that we're focusing on, the significant impact
20 effects.

21 MS. HILL: Okay. That brings us to the part of
22 the agenda where we open it up for public comments, and I'm
23 wondering if there's anyone here tonight who would like to
24 make comments. Sure.

25 MR. HART: If I could, on the time line for

1 installation, October to November in 2005, commercial crab
2 season opens on November 15th and it would be my guess
3 between the jetty and where it exits off Smooth Ridge, you
4 could probably encounter anywhere from 700 to 1200 crab
5 traps, you know, unless you -- well, we set 18 hours before
6 the opener, so you know, it would be my recommendation that
7 you got it laid before then. Then you wouldn't have to
8 deal with the crab traps.

9 MS. HILL: And how long is the crab season?

10 MR. HART: It stays open until June, but most of
11 the activity there, we catch about 60 to 80 percent of our
12 crabs in the first month generally, but there will be
13 traffic, and where it goes inside of Pajaro Hole and all
14 the way across the flat to Soquel Hole is -- I named it the
15 Honey Hole years ago because I made a fortune there a
16 couple times, but there is a lot of crab where that's going
17 to cross, and you know, I would recommend that you got it
18 done before that date. Then you wouldn't have to deal with
19 it.

20 MR. DAVIDSON: Can I just ask, for sure the crab
21 season starts November 15? Doesn't it kind of vary a
22 little bit?

23 MR. HART: Unless they go on strike. No, that's
24 set in stone. It isn't like salmon season. It opens
25 November 15th here and then from Sonoma County line north

**8-1,
cont.**

1 it opens on December 1st. So we have an early opener down
2 here for the crab, an early start. I generally fish tuna
3 off the Oregon/Washington coast and I've been up there when
4 they are laying cable like in some of the other pictures
5 that we saw, and I know that they hired commercial boats to
6 be sort of like a liaison to other boats in the area to
7 monitor traffic and to communicate with them, and I think
8 that would be a good idea to do here since it's been done
9 in other areas.

10 MS. HILL: Could you do me a favor and state your
11 name clearly for the court reporter here?

12 MR. HART: My name is Tom Hart and I'm president
13 of the Moss Landing Fishermen's Association.

14 MS. HILL: Great. Thank you.

15 MR. HART: We will write a written comment also.

16 I had a question on the hydrophone and you were
17 talking about whales and being able to pick up their
18 sounds. My -- I was just curious if you can -- if they can
19 identify individual whales and has that ever been used as a
20 way to count to see how many whales there are?

8-2

21 MS. McNUTT: Absolutely. They have distinct
22 sonograms.

23 MR. HART: And then like I said earlier, I think
24 the landing -- the alternative 2, I know that the bottom
25 sand moves there a lot and that cable would be exposed from

8-3

1 time to time. I don't think that would be a good area.

2 That's all I picked out, but the most important
3 thing that I can see is that the work got done before
4 November 15th and it would save a lot of grief. I don't
5 like fishing around the cable but I wouldn't want to have
6 my gear there because the fact is while the Point Sur was
7 doing a lot of mapping this couple months ago up off of the
8 Pigeon and stuff, they were dragging my crab gear all
9 around the ocean. I had to go find it 2 or 3 miles from
10 where I put it. They were very good about avoiding them in
11 the daytime, but they were in there at nighttime too and
12 they were in the gear all the time.

13 MS. BROWN: Keith, would you like to elaborate on
14 the hydrophone?

15 MR. RAYBOULD: I know that I've done a workshop
16 where they talked about bringing the cable observatory up
17 in the Arctic, and the -- that some of the scientists there
18 who were monitoring whales were really enthusiastic about
19 having the cable observatory there because they would be
20 able to monitor the whales passing through various breaking
21 ice across in the Arctic and they were very excited about
22 that, and they thought that that was one of the best ways
23 that they could actually monitor migrating whales and what
24 was happening to them and their migrating patterns, so I
25 think it could be pretty valuable.

8-3,
cont.

1 MR. HART: Another thing is like when we go
2 fishing, we, you know, put a certain amount of curve in our
3 lines to attract fish, and I think it would be a good test
4 to -- after the cable's laid, to monitor its path for a
5 leaking current and stuff because, you know, it could -- it
6 could be something that attracts fish, and doesn't matter
7 if it's insulated or not. If it's there, you know,
8 Murphy's law happens.

9 MR. RAYBOULD: Yes, good idea.

10 MS. HILL: Okay. Thanks.

11 Any other public comments, please come forward.
12 And just as a reminder, if you don't make comments tonight,
13 you still have until April 26 to submit written comments to
14 either the State Lands Commission or to the Sanctuary.

15 MS. BROWN: Either fax, email or mail them in.

16 MS. HILL: Anything else? Why don't you do the
17 honors?

18 MS. BROWN: The meeting is now closed.

19 (The meeting concluded at 7:10 p.m.)

20

21

22

23

24

25

1 STATE OF CALIFORNIA)
) ss.
2 COUNTY OF SANTA CRUZ)

3

4

5

6 I, MELINDA NUNLEY, a Certified Shorthand
7 Reporter, License Number 9332, and a Notary Public in and
8 for the State of California, do hereby certify:

9 That the said Transcript of Proceedings was
10 reported by me in machine shorthand at the time and place
11 therein named and was thereafter transcribed by means of
12 computer-aided transcription, and the same is a true,
13 correct and complete transcript of said proceedings, to the
14 best of my ability.

15 I further certify that I am not of counsel nor
16 related to any of the parties hereto, nor in any way
17 interested in the outcome of these proceedings.

18 IN WITNESS WHEREOF, I have hereunto subscribed my
19 name and affixed my official seal this 14th day of April
20 2005.

21

22

23

24

25

Certified Shorthand Reporter
and Notary Public